

COLUMBIA LIBRARIES OFFSITE  
HEALTH SCIENCES RESTRICTED



HR00183423

SERIAL

V. 18

A

Jan - June  
1901

**Columbia University**  
**in the City of New York**

COLLEGE OF PHYSICIANS  
AND SURGEONS




Reference Library

Given by

*Dr. Edwin B. Craig.*

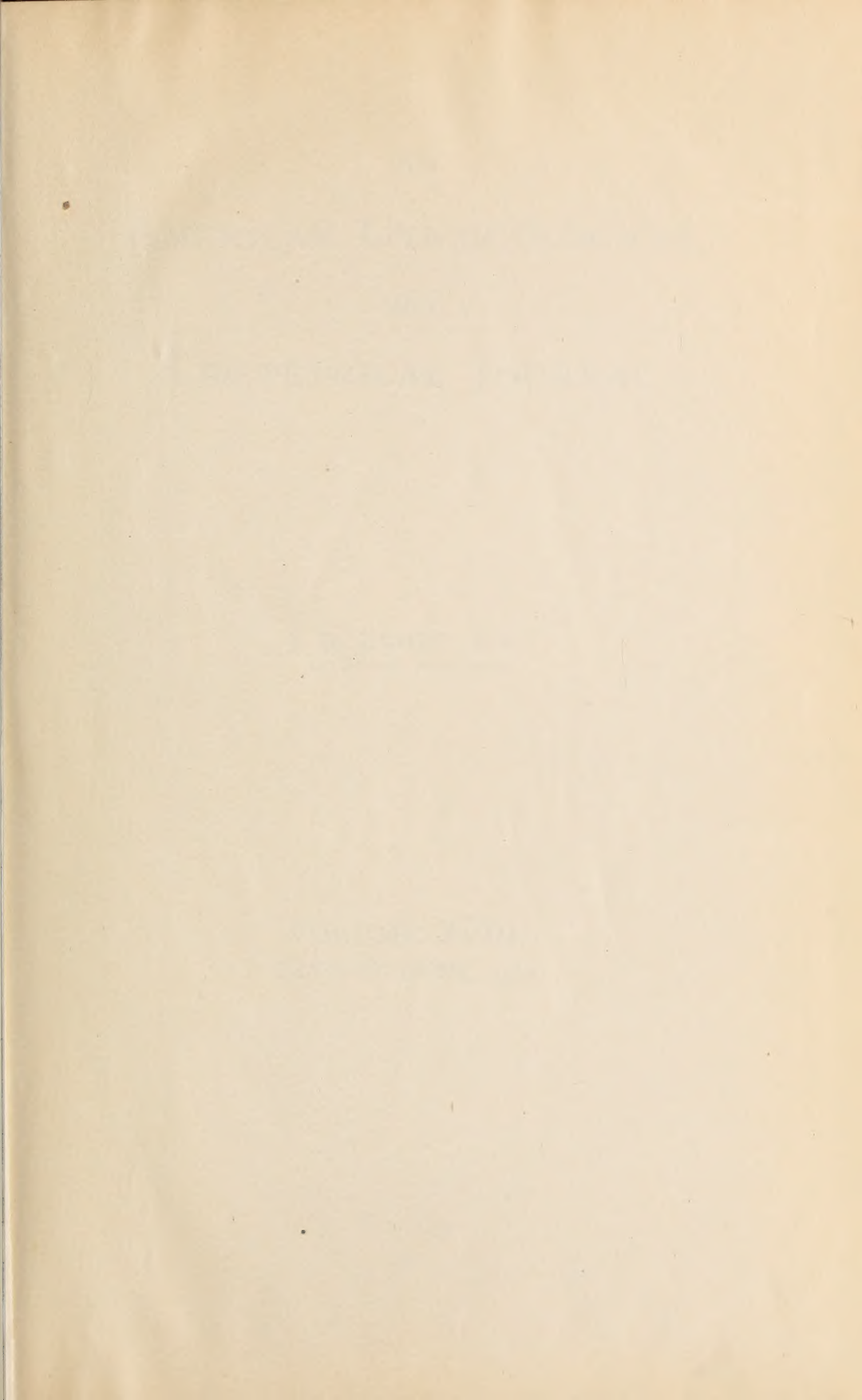


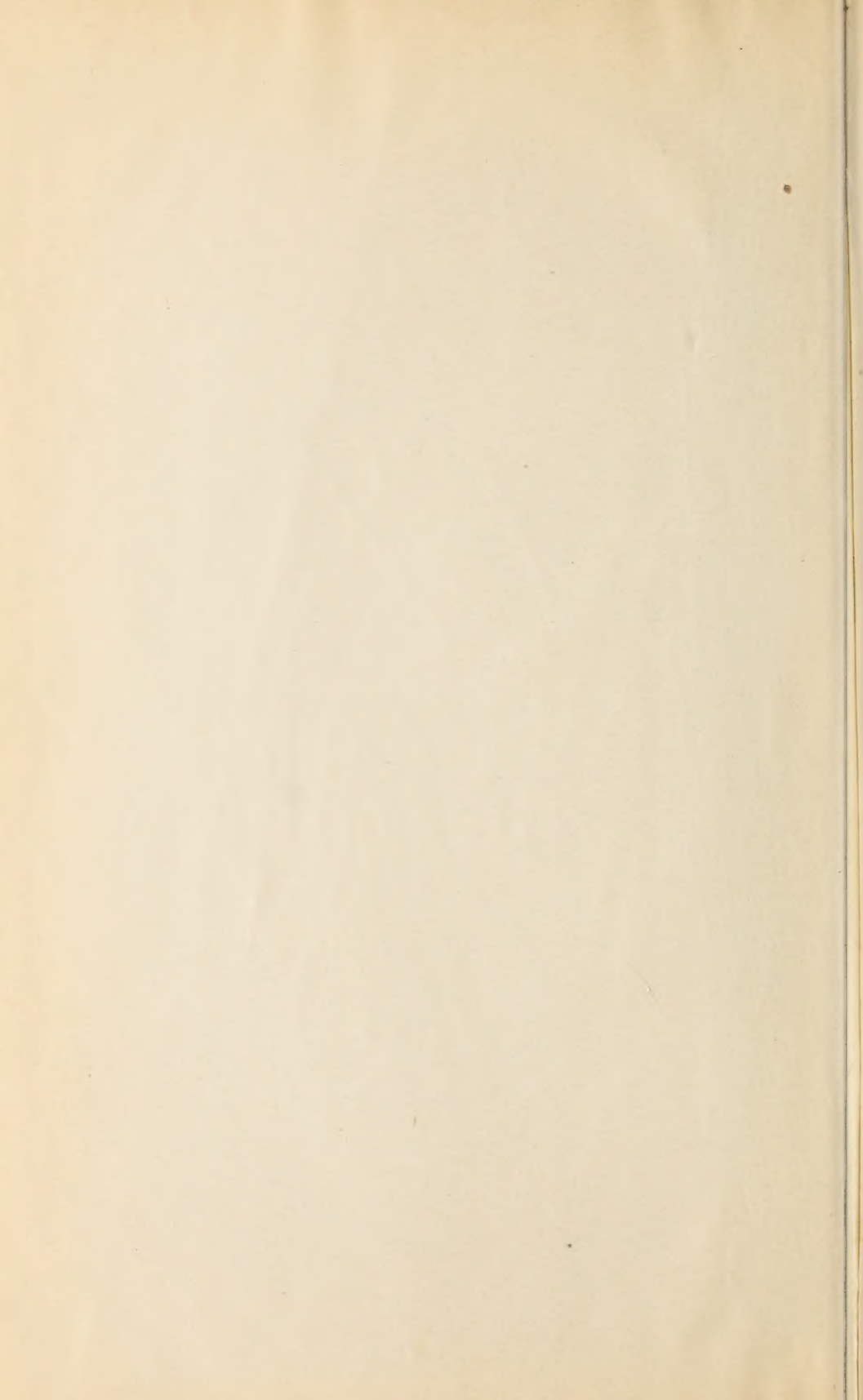




Digitized by the Internet Archive  
in 2014









THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL

J. D. EMMET, M.D.,  
EDITOR AND PROPRIETOR

VOLUME XVIII.  
*JANUARY—JUNE, 1901*

NEW YORK  
1901

COPYRIGHT, 1901,  
By J. D. EMMET, M.D.



THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

---

JANUARY, 1901.

---

DEEP IMPRINTS.

BY SIR WILLIAM H. HINGSTON, M.D., D.C.L., LL.D., F.R.C.S.E.,  
Surgeon-in-Chief, Hotel Dieu Hospital; Professor of Clinical Surgery, Laval University, Montreal,  
Canada.

When one occupying a most prominent position in the world of surgical art, shuts himself out from the more active scenes of his greatest triumphs in order that he may have more leisure for thinking out the problems on which his mind had been engaged during a long and eventful career and for giving them to the profession, he confers a lasting benefit on the art to which he had devoted the greater part of his life; but to him it is a wrench which only those similarly circumstanced can readily understand.

When it became known that Dr. Thomas Addis Emmet had resigned his position a few months ago as Surgeon-in-Chief to the Woman's Hospital of New York, where, during forty-six years he had displayed such wisdom and forethought in diagnosing, and such patience and skill in operating, a feeling of regret was experienced by the profession on both sides of the Atlantic; for Dr. Emmet had for a long time been as well known, and as much appreciated in Europe, as in the best-informed medical centres in the new world.

Will you permit an observer from without, to group, if group he can, work so various and so important and to note the views of a great teacher, who, speaking, at first, to ears but little inclined to respond, had ultimately the satisfaction of seeing his views accepted, acted upon, and eventually incorporated into every work on gynæcology, sometimes with, sometimes without, acknowledgment? With the rapid

strides made by gynæcology within the past few years, and markedly in America, and with the multiplication of text books—quick to appropriate, sometimes less quick to acknowledge the source of information—the first teacher of what is now known and admitted to be safe and prudent doctrine is perhaps insufficiently known to many of the younger generation.

Yet, to wipe out what Emmet, in those forty-six years, has done in gynæcology would be to leave undone much that has been done, and well done, and much of what is most valuable in the art.

Gynæcology, in its present and distinct form, is emphatically a new department of surgical art. Whether it is that woman in America is better looked after than is her sister in Europe; or whether it is that in her life of hurry and unrest she more requires the attention of the specialist than does her less nervous transatlantic sister, it is not for me to determine, but the cisatlantic woman certainly receives it, and the hospitals, public and private, founded for her comfort and relief, are numerous and well appointed, and afford almost unrivalled fields of clinical observation and instruction. It is but twenty-five years since about that number of medical gentlemen in the City of New York founded the society for gynæcological purposes only; and when, as to a distinct department of surgery, Dr. Emmet submitted the first paper for its consideration. So much has been written since then that to attempt to trace out what is original in certain departments of gynæcology is but to copy and to imitate his work.

First, by most surgeons, especially by those who, like myself, had had the advantage of Symes' clinical instruction, the scissors were looked upon with disfavor, and as being unsurgical. Emmet taught their value in all plastic operations, and who, accustomed to operate for what has been called lacerated perinæum, would attempt to do without them?

Foremost among the valuable work done at the Woman's Hospital of New York was the successful operation for the cure of vesico-vaginal fistula. To Marion Sims is due the credit of having been the pioneer in that direction. Previous to his time an occasional success was recorded in different parts of the world, but it was not until Marion Sims introduced his admirable speculum (which still remains the favorite) could anything like success be predicated in even the simplest case.

But Marion Sims' operation was confined to those cases where there was but little loss of tissue. To Emmet is due the credit of devising means for closing an opening or openings when large quantities of bladder or urethral tissue had sloughed away, by means of trans-



plantation, much as in Langenbeck's ingenious operation of staphylo-orrhaphy. This was an entirely new departure, and one which brought comfort to many a sufferer.

In cases of troublesome cystitis, there may be differences of opinion as to the relative value of dilatation of the urethra and button-holing it, in order to obtain rest, but we have now come to look upon the latter, as practised by Emmet, as a simple and safe expedient, affording drainage and making that drainage permanent by uniting, as he suggests, the mucous lining of the bladder to that of the vagina. The difficulty formerly experienced by closing openings occurring during parturition, caused men to hesitate to make an artificial opening which might eventually give trouble to close. Practically, however, there seems to be no difficulty in closing the opening made by the knife.

The recognition of the causes of prolapsus and procidentia uteri was a most important step toward the relief of sufferers from these displacements. The views advanced were novel, but, at once, convincing.

The recognition that there exists a health line, or, to use Dr. Emmet's words, a "plane of elevation, in every woman's pelvis, which the uterus must occupy, or the pelvic circulation will be obstructed, and that this point varies with each individual," was an important advance in surgery. It was, at the same time, a severe blow to the indiscriminate use of pessaries; and even ventral fixation—at one time performed with a frequency that was alarming, has—*Deo gratias*—fallen somewhat into disuse. To diminish the use of pessaries, and to render the operation of ventral fixation less frequent, Emmet's plastic operations on the vagina have yielded important results—results which for the most part have been permanent. It is not pretended by the writer that pessaries are always to be discountenanced. Every practitioner knows their value; but their use is being more and more restricted, and with advantage, while some are wisely content to use tampons and elevated position of the pelvis, so as to maintain the uterus at a higher plane.

Perhaps the most important observation made during his forty-six years of hospital life was to the effect that what was called uterine trouble of an inflammatory character was commonly the result of inflammation of tissues OUTSIDE the uterus, and not inflammation of that organ. Other observers readily acquiesced in these views; while by others the peritonæum, not the pelvic fascia, was claimed as the site. It would be quite unsuited to the nature of this short paper to enter into a disquisition on this subject; suffice it to say that, thanks to Emmet's observations, the uterus, in most of the inflammatory affections, has

been recognized as the sufferer from mere extension of inflammation from its neighborhood, and is not the seat of primary inflammation. Hence, the enormous value of hot-water douches, which have so happily replaced the cold astringent lotions of bygone years.

Dr. Emmet has rendered an important service to the profession in relieving from censure and sometimes from legal action the accoucheur who had resorted to forceps for the termination of prolonged parturition. It was formerly generally believed and taught that the forceps was responsible for the sloughs which followed tardy delivery, and meddling midwifery was denounced as a consequence. Since Emmet's views have prevailed, the forceps has been resorted to at an earlier period than formerly, and extensive sloughings and vesico-vaginal fistulæ *pari passu* have diminished. In some parts of this continent another factor has entered in favor of early instrumental interference: a tariff has placed a high estimate on artificial work, and the accoucheur is rewarded accordingly. Whether Dr. Emmet's views have or have not swayed the legislature to frame laws, and judges to interpret them, it may be stated, with truth, that instrumental interference is now more frequent than formerly, and sloughing and fistulæ less often met with.

It may be safely conjectured that where personal *interest* is in favor of early instrumental interference, a higher tariff would not diminish the use of forceps.

But a lesson has been taught gynecologists by an acknowledged master, yet one which figures not in work done, and cannot appear as work prevented: I allude to the number of operations which, Emmet has taught us, may, with a little patience, be done without. It requires no little courage to dissuade the subject of a small ovarian growth, or of a harmless, painless uterine fibroid to continue her daily routine of duties and not to be anxious about what may never give pain or distress. I have been many times personally cognizant of cases where pressure was made to have an operation on the ovaries performed for a fancied ailment of those organs: Sometimes it was a uterine fibroid, small in size, painless, slow in growth, unaccompanied by signs of pressure on nerve or blood-vessel, and unattended by hæmorrhage, which gave uneasiness, when a homely observation: "it will do no more harm, madam, than a knot in a tree" would send the patient to her home reassured and satisfied. This, to my mind, is the greatest service which can be rendered to the profession and to woman, and one which can best be appreciated by those

who are in position to see the vast number of avoidable operations which are being constantly performed by the excessively diligent.

If Dr. Emmet had done no more in this direction than to discountenance operations which he taught us could be done without, even had he done nothing to construct a distinct department of an important art, he would have placed mankind under the deepest obligation. And it is a satisfaction to feel that while he has put aside the more laborious hospital work, Dr. Emmet still remains—and may he long remain—an active worker where, without him, the art of surgery would be less informed.

---

## INTRA-PELVIC OPERATIONS FOR RELIEF OF POSTERIOR UTERINE DISPLACEMENTS.\*

BY WALTER B. CHASE, M.D., BROOKLYN, N. Y.,

Consulting Gynecologist and Obstetrician to the Long Island College Hospital of Brooklyn  
and Consulting Gynecologist to the Hospital of Hempstead.

The number of cases of uterine retrodisplacements which cannot be relieved by pelvic massage or mechanical support is numerous. Added to these are a class of cases in which adhesions more or less strong preclude safe replacements by any method short of opening the peritonæal cavity and cutting these adhesions. The suffering and the measure of incapacity these posterior fixations of the uterus entail admit of a wide degree of severity. In one case the patient suffers but little; in another, the same apparent physical condition produces invalidism, appearing in a variety of symptoms too familiar to require repetition. Coincident with this and so closely related to it as to often baffle perfect differentiation as to its ætiology, is a train of phenomena manifested through the sympathetic nervous system which adds to the patient's discomfort and serves to complicate the ends to be accomplished by rational treatment.

Added to this in not a few cases is the barrier this condition offers to reproduction. The fixation of the uterus effectually prevents the ascent of the gravid uterus, and as a result abortion or premature labor follows. So far as reproduction is concerned the consequences are the same as sterility. The reasons which prompt those so suffering to seek relief is twofold, first and most frequently the pain and the impairment the condition imposes, and as a second consideration, the desire of motherhood.

---

\* Read before the Brooklyn Gynecological Society, Jan. 4, 1901.



The principles which guide in the management of these cases is the theme to which I briefly invite your consideration. Experience and judgment must decide as to the wisdom of interfering in a given case. Not every case of posterior fixation of the uterus justifies resort to laparotomy for its relief, while some cases will respond to none but radical measures. In this discussion I shall not refer to the Alexander operation, for its field of usefulness is in cases of retro-displacements, in which reposition is not precluded by adhesions.

If the abdomen is opened to correct the displacement, one of three methods may be adopted, *viz.*: intra-pelvic shortening of the round ligaments, ventro-fixation or ventro-suspension.

The utility of intra-pelvic shortening of the round ligaments has quite recently taken a position as a rational and efficient method in the correction of these deviations. It has limitations, and this fact will determine its applicability. If, after a retroverted or retroflexed uterus is relieved of adhesions and the barriers to normal replacement are, as far as practicable, removed, the question must then be determined as to the method to be followed in thus retaining it. If the round ligaments are of sufficient tensile strength to support the uterus properly, their shortening is clearly indicated as the simplest and best method at our command. The exact manner will depend much on the judgment or preference of the operator.

In Montgomery's new text-book on "Practical Gynæcology," he describes the technique of three operations for intra-peritonæal shortening of the round ligaments as follows: "The operation may be performed, as Wiley has suggested, by doubling up from two to four inches of the ligament on each side and uniting it by sutures, so that the shortening of the ligament draws and holds forward the fundus." "Mann grasps the broad ligament about the function of its middle and outer third, and folds the ligaments in three parts, which are united by sutures, so that the ligament is well shortened on each side." "A. P. Dudley of New York performs an operation which he calls desmopyenosis. It is carried out as follows: After opening the abdomen, an assistant introduces two fingers into the vagina, pushes the uterus as high as possible in the pelvis, and it is thus brought through the abdominal incision; an oval denudation is made upon the anterior wall, taking care not to go too near the bladder; then each round ligament is brought up to the portion of the peritonæal covering of the inner side, denuded to correspond to that on the uterus, and the three denuded surfaces are united with catgut sutures. In adjusting these sutures care must be taken to pass them suffi-

ciently deep in the uterine tissue to secure against cutting out before union has occurred. The uterus when dropped forward is held in position of anteversion."

Dr. D. Tod Gilliam of Indianapolis, in a paper read before the American Association of Obstetricians and Gynæcologists at Louisville in September last, advocated round ligament ventro-suspension of the uterus for retro-displaced uterus. He advocates this measure as it will afford a natural support, with fair mobility and permanency, and will adapt itself to pregnancy and parturition. His method is a three-inch abdominal section, the breaking up of adhesions, bringing the round ligament to the opening, with the patient in the Trendelenburg posture, and carry a thread about it one and a half inches from the uterus on both sides. He then exposes the rectus muscle near the lower end of the incision, and then passes the forceps at the margin of the incision and more than an inch above the pubes, and places the thread which surrounds the ligaments into its jaws. The forceps is now withdrawn and both ligament and thread are brought up through the perforated wound in the abdomen and, while the ligament is held taut, fastened by a to-and-fro catgut suture pressed deeply through the ligament, including the tissues on either side. Whichever method is deemed best for any particular case may be adopted, or any other modification which seems more nearly to meet the indications. When the round ligaments are much attenuated, as sometimes happens, or are absent, they cannot be made available for such purposes.

This manner of maintaining the uterus in position, which seems ideal and might be justly termed physiological, appears free of danger to the patient, which may be a fatal objection to fixation or suspension. If pregnancy follows, there should be with the enlargements of the uterus and adnexa such a corresponding lengthening of the round ligaments as will in no way interfere with the progress and termination of normal gestation, and herein lies its value. It would seem on physiological grounds that ventro-suspension would better meet the exigencies of gestation than ventro-fixation, though it would appear that in suspension there is greater risk of intestinal angulation or obstruction, than in ventro-fixation.

This, however, is not the principal risk which attends these measures, whether from ventro-fixation or ventro-suspension. The danger arises from their becoming a barrier to normal and safe gestation. The recent experience of an eminent fellow of this Society, which is about to be made public, will serve to impress on the skeptical, the danger attending such procedure, even though they may have

escaped the grave complication which compromised the life of the unfortunate mother. The case was briefly as follows, for through the courtesy of the gentlemen I was present at the operation. A woman, in her first pregnancy, had been operated on by one of the most distinguished American gynecologists for retro-deviation. It was found on completion of the period of gestation that Nature was unable to accomplish delivery from an anterior fixed position of the uterus, the fundus being close to the anterior abdominal wall. The cervix was fixed posteriorly high up by the tilting forward of the uterine body, the cervical canal was four or five inches long, and the cervix refused to dilate on the appearance of labor. Cæsarian section was resorted to as the only possible mode of procedure and twins were removed. The twins survived; the mother succumbed to exhaustion. The operation revealed a dense adhesion about one inch square, holding the fundus close to the abdominal wall, which accounts for the dystocia. The expectation of the operator that the two or four stitches which united the fundus of the uterus to the anterior abdominal wall would stretch into a suspensory ligament was not realized, but instead there was an unexpected plastic exudate which became organized into an adhesion so strong as to hold the uterus immovably forward. Just here is the element of uncertainty and danger. No operator can predict in advance if the uterus is stitched to the abdominal wall, how large or strong the resulting adhesions will become. If small, they will probably stretch into a suspensory ligament; if dense and large, they may result in innumerable adhesions, with a train of symptoms such as has been described. From the small number of accidents of this nature which have been recorded the inference is that the risk of ventro-suspension is relatively small, and if it could be demonstrated that such was the fact, it would go far towards relieving operators of the anxiety concerning such complications. On theoretical grounds it would appear that the danger of ileus or the entanglement of the mesentery in such adhesions was a serious menace to the safety of the patient, but it must be admitted that in practice the gravity of procedure lacks confirmation. But notwithstanding the fact that cases have not been more frequently reported, I cannot escape the belief that they have occurred. The question is raised by some of large experience whether an operator is justified in allowing his patient to take the risk of complications attending pregnancy after anterior suspension and fixation. There is some risk, no one will deny—how much or how little no one can predict with absolute certainty.



In a recent case coming under my observation of a young woman with several children suffering from chronic ovaritis of left ovary, with prolapse of the same, and extreme retroversion with adhesions, which was attended with pronounced neurasthenia, I removed the diseased, inflamed and prolapsed ovary, stitched the uterus to the abdominal wall by silkworm-gut suture, which passed through the abdominal wall, and fastened to large, flat button at the lower angle of the abdominal incision, so that they could be removed, and ligated the right Fallopian tube for the purpose of preventing further conception. Resection of a portion of the tube would offer more certain results.

In deciding what is best to be done where intraperitonæal shortening of the round ligaments is insufficient or impracticable for correcting posterior deviations, associated with adhesions, making laparotomy necessary, the circumstances surrounding each case, the condition of the patient, and the desire for children in those married or those anticipating marriage, must be taken into account, and each case decided upon its merits. This statement, however, is not to be construed into a sentimental license for the prevention of conception *per se*. In case these posterior displacements demand operative interference, in those who have passed the child-bearing age or those who will never enter wedlock, resort had better be had first to shortening of the round ligaments, if that will overcome the deviation, and if not, ventro-fixation or ventro-suspension. Due weight should be given to the risk of intestinal angulation or from obstruction to gestation arising from the undue size of the ligaments or adhesions which follow as a result of anterior fixation or suspension. The utility of these methods in relieving one of the most distressing ailments to which woman is subject, is extremely satisfactory. The dragging pain, the backache, the mechanical obstacles to defecation, the direct pressure, and the symptoms, few or many, which perturb the sympathetic nervous system with their long train of reflex phenomena, give place to healthy enervation, and returning health asserts its rightful sway.

To recapitulate: (a) Posterior deviations with fixation from adhesions is usually a serious menace to health and often a barrier to childbearing; (b) that this condition of affairs can best be treated by laparotomy; (c) that after the adhesions have been severed the cure should be completed by maintaining the uterus in an anterior position: first, by intraperitonæal shortening of the round ligaments; second, if this is insufficient, resort should be had to anterior abdominal suspension or fixation; (d) that experience, while not settling all points associated with this subject, nevertheless has demonstrated that efforts

to maintain the uterus in an anterior position either by ventro-suspension or ventro-fixation, are from the uncertainty of the degree and extent of the adhesion, not devoid of danger in the case of conception; which should be considered, and in certain instances provided against; (*c*) that ligation or resection of the Fallopian tube is a more rational procedure than ovariectomy, for the prevention of conception, where justifiable, as it does not unsex the woman, and saves her from the premature menopause and its unpleasant consequences,—a physiologic reason of much weight,—and (*f*) that the value of these methods of treatment of posterior deviations is amply demonstrated and their employment should be more generally adopted.

263 Hancock Street.

---

A CASE OF CONGENITAL HYPERTROPHY OF THE CERVIX, COMPLICATED BY PROLAPSUS AND BILATERAL PYOSALPINX, IN A GIRL 17 YEARS OLD—VAGINAL HYSTERECTOMY.

BY ABRAM BROTHERS, B.S., M.D., NEW YORK, N. Y.,

Visiting Gynecologist to Beth Israel Hospital; Adjunct Professor of Gynecology to the N. Y. Post-Graduate Medical School and Hospital.

Jennie L., æt. 17, single. Her menstruation began at 11, was always regular (four-weekly type), and moderate in amount.

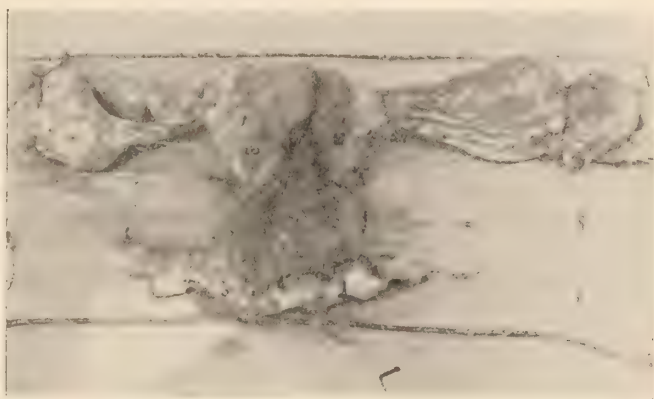
At the age of 14 she noticed the womb beginning to protrude at the vulva. She entered one of the large hospitals in this city, where a diagnosis of prolapsus uteri was made and an Alexander operation with shortening of the round ligaments was done by one of the most prominent gynecologists in the city. She left the hospital after five weeks absolutely unrelieved. The uterus protruded from the vulva as before. She then floated about from one doctor's office or dispensary to another until she called on me on November 3, 1900.

I found a slim, delicate, anæmic child with an expression of anguish on her face, who walked with body bent forward, evidently suffering much pain. She was feverish (101° F.), and complained of pelvic pain, anorexia, vomiting, and diarrhœa. Although formerly regular, her last period three weeks previously was two weeks delayed and accompanied by violent pelvic cramps.

On local examination the cervix was eroded and protruding one inch from the vulva. On slight traction it could easily be brought

down another inch or two. The anterior and posterior vaginal walls were also prolapsed and constituted a prominent cystocele and rectocele. The uterine canal was filled with a thick, whitish mucopurulent discharge. On bimanual examination the uterus was found to be large but was not measured with a sound. On the right side a boggy mass could be felt, which was very tender to the touch. On the left side there was suspicion of a similar mass. The diagnosis of complete prolapsus uteri with bilateral pyosalpinx was made and a radical operation suggested:

On November 10th, at Beth Israel Hospital, I removed uterus and pus tubes in one mass, as shown in the specimen. She sat up in bed



on the 10th day and left the hospital on the 16th day. At no time was there any appreciable rise of temperature. She was perfectly well six months later when last seen.

The specimen consists of the uterus, both tubes filled with pus, and the ovaries. A portion of the vagina was dissected downward and removed with the uterus in order to guard against prolapsus of the vagina in the future. Although we were dealing with an undersized girl of 17—practically a child—it was possible to remove all of these organs in one mass. In order to render this easier of accomplishment the uterine wall anteriorly was submitted to a hemisection, the lower portion of the broad ligaments with its vessels was secured in ligatures and the uppermost portion in clamps, which were removed after forty-eight hours. Anteriorly and posteriorly the vaginal mucosa was sewed to the peritonæum and the space between tightly packed with gauze.



On examining the uterus it will be seen that more than half consists of cervix. By actual measurement the distance from fundus uteri to internal os is 1 inch, and that between internal os and external os,  $2\frac{1}{4}$  inches. Hence, we are dealing with a case of congenital hypertrophy of the cervix, associated with prolapsus uteri and later complicated with bilateral pyosalpinx.

The point of interest chiefly connected with this case is the hypertrophied cervix, which evidently was overlooked two years previously when the child was subjected to an Alexander operation. This oversight was in great measure justified because of the associated prolapsus uteri et vaginæ.

Owing, however, to the absolute failure of relief after the operation, the girl refused to submit to further surgical interference. As a result she oscillated from one dispensary or doctor's office to another. Thanks to the free use of sounds, pessaries, etc., the girl developed the bilateral pyosalpinx. There is no reason to suspect a gonorrhœal origin as the uterus protruded from the vulva, the girl was a chronic invalid, and her home surroundings excluded such a suspicion. Besides, I have removed a half dozen or more pus-tubes from women in whom I was able to satisfy myself that the infection was carried by means of a uterine sound in the hands of a doctor.

112 East Sixty-first Street.

---

## UTERINE CURETTEMENT.\*

BY DOUGLAS C. MORIARTA, M.D., SARATOGA SPRINGS, N. Y.,

Senior Surgeon, Saratoga Hospital; Attending Surgeon, St. Christina Hospital.

While uterine curettement is an operation with which we are all familiar and which *per se* is not particularly difficult to perform, yet it is one of very great importance. I do not know of a surgical procedure that confronts the general practitioner of greater moment; to delay its performance, or to repeat it unnecessarily, is often serious; and when well done it is many times a life-saving measure. Those men who have entered the profession since the introduction of curettement will never fully appreciate its great value, nor the difficulties we met in treating these cases previous to this time. It does not seem possible

---

\* Read before the Glens Falls Medical Society, November 1st, 1900.

that in 1895 curettement for septic conditions of the uterus was not taught. When I graduated in medicine in 1885, the teaching for this condition was frequent irrigation of the uterus by means of a Chamberlain tube (and that was a recent method), with constitutional treatment, principally quinine, iron, and alcoholic stimulants. How different it is now! Once the condition is recognized, curettement is immediately done and the patient, unless it is one of those cases of virulent infection, is promptly better; while under the old method of treatment one must irrigate the uterus almost constantly for a week or more, in many cases the patient growing worse and worse, and finally succumbing to the disease. I can think of nothing with which to compare the change in results that curettement has produced in these cases, unless it is diphtheria, when we compare the antitoxine treatment and its value with the old-time accepted treatment and its results. Surely in each class of cases, where the old routine treatment was followed, the patient only recovered after a long and hard struggle, which was followed by an equally long and tedious convalescence.

I purposely consider to-night only the curettement of septic and sapræmic conditions which occur as puerperal complications. There is no material difference in the infection, whether occurring during an abortion or at full term, unless there should be a mixed infection; though no doubt the more early the abortion the less apt are we to have a virulent infection. This is because of the greater local resistance of the tissues, and possibly because the lymphatics are less active, though if a virulent infection should occur it would be equally bad in either case. Early abortions affect the endometrium more markedly, the uterine walls and the general system less; though we do meet them where there is as much disturbance as in a uterus at full time, depending on whether the infection is mixed or not, and whether it includes the whole endometrium, or wall of the uterus, or only a portion of it. Very sharp symptoms may occur in these puerperal cases with no apparent gross local lesion when the peritonæum, pleura, or heart membranes are involved; and this is particularly so in very virulent infection.

Septic and sapræmic conditions are the two general classes of cases which confront the general practitioner; in their early stages they have very similar symptoms, and because of this bacteriologists suggest that we differentiate them by means of cultures. But those of us in general practice who do not have a bacteriological laboratory at our command must be governed in differentiating them by the clinical manifestations

of the disease, which is really the only difference of practical importance to the general practitioner.

Sapraemia is essentially the process of decomposition, is accompanied by a foul odor and discharge from the uterus, with little, if any, constitutional disturbance, which promptly subsides on the removal of the retained placenta, membranes or clots, either by curettage or irrigation. Septicæmia will, unless the foci are outside of the uterus, very early in the condition have the foul odor and discharge, but soon exhibits grave systemic manifestations which are unmistakable and which must be met promptly and positively or they will terminate the life of the patient; in this condition the toxæmia continues often after the uterus is carefully and completely emptied.

Just here it is fortunate for the patient if the operator is familiar with this class of work and is competent and sure of his position. Quite often after a curettement the case goes on badly and the attendant is not certain whether the uterus is empty or not and attempts a second curettement, other abrasions in the endometrium are made, and so another point of infection is established. This is most unfortunate; while to leave in the uterus, though fear of a second curettement, a bit of tissue from which the infection is spreading, is much worse. I can recall with much regret three such cases in my own practice, where a curettement was done, the symptoms did not subside as anticipated, the temperature and pulse grew more alarming. The procedure was repeated without result; *i.e.*, there was no material found in the uterus; though I am free to state that I am sure that the second curettement, either by making abrasions for the infection to enter the circulation more rapidly by the lymphatics, or blood directly, or fear, or exhaustion, incident to a second procedure, were factors in making the patient much worse.

While curettement is not an intricate measure, it is necessary for the operator to do it perfectly, which means completely and aseptically. After he has become familiar with this procedure, he can readily decide to his satisfaction whether he has the uterus clean or not, and when he can be positive that he has all the material removed from the uterus; then, and only then, has he mastered this so-called simple but very important operation. But as we watch different operators, it seems as if they were undecided when this point is reached, though I cannot emphasize too positively the necessity of being absolutely sure that, when one finishes a curettement the uterus is entirely free from any portions or particles of matter undergoing degeneration. Very recently I was assisting a friend at a curettement; after a time he decided the



uterus was empty and appealed to me to verify his judgment of the condition. When, on feeling the walls of the uterus over with a curette, I used the forceps and removed a piece of placenta several inches square.

Complications in these cases are not many, the most common one being infection; though I have twice ruptured the wall of the cervix into the abdominal cavity when dilating the cervix in septic conditions, though the dilation was not at all excessive—in fact, not up to one inch. Both of these cases I sewed up and was fortunate in having recoveries. I saw a similar case in consultation, though the complication was differently produced. When the curette was introduced it went directly into the abdominal cavity, at a point in the lateral wall midway between the internal and external os. An abortion had been produced, the patient performing it herself by means of a sharpened stick, which had entered the abdomen through the wall of the cervix. In this patient the canal was determined, the uterus curetted, packed with gauze, and the patient recovered after a sharp illness.

Another condition that I have met personally is where the cervix is very long and patulous—at least three inches—and the internal os tight—essentially an hour-glass condition. I have curetted this, the cavity of the cervix, and supposed I was in the uterus, and when nearly finished discovered I was not in the cavity of the uterus at all. This has occurred with me so often that it seems it must have occurred with others, but I have never seen any mention of it. I well recall the first case of this sort I met. It was a septic case, following a criminal abortion of several months. I did a curettement and removed some threads of tissue or membrane, packed the canal, and put the patient to bed. The following day the patient was very much worse, so that we did a second curettement, when I discovered that I had not been in the cavity of the uterus previously at all; the uterus was now emptied of a quantity of foul material and the patient went on to a recovery.

The question of anæsthesia arises when this operation is to be done. While some operators say they do not ever use anæsthesia, others always use it. In my own work I prefer to be governed by the conditions of the case, as often one is obliged to use an anæsthetic, while others stand the operation perfectly well and do not require it.

The technique of the operation is not complicated though it is essential to have definite plans and arrangements for details required, if one is to operate quickly and observe a careful aseptic, surgical technique. Two assistants are required other than the anæsthetizer, if

an anæsthetic is to be employed; the nurse, if you have one, will answer for one assistant. As many of these cases are cared for at home and are urgent, and so much depends on the aseptic technique, it is well to arrange for them somewhat in advance. Personally, I have a bag always in readiness, containing, in addition to my instruments, two pairs of gloves, two irrigating bags with irrigating tubes, a dozen towels and one gown, all of which are sterilized and ready for use. Besides these, the bag contains a Kelly pad, Hunter Robb straps, anæsthetic, inhaler, iodoform gauze in strips, brush, soap, permanganate, oxalic, etc. The instruments are previously boiled, carefully dried and pinned up in a sterile retainer. This retainer when opened serves well as a tray for the instruments. The one who does this, prepares his hands as carefully as for any aseptic procedure and wears boiled gloves.

The gloves are doubly useful for the general practitioner and his assistants in these operations; first, when worn during the operation they perfect the asepsis, which is difficult for the general practitioner to observe because of exposure to the various infections in his daily work. Second, gloves are very useful if one is short of assistants for, after cleaning up, they may be worn while the patient is being placed in position and her clothing arranged; then, when all is in readiness, they are removed. Boiled water for cleaning the parts and making solutions, if any are used, for the irrigators are essential; in an emergency a very small quantity will suffice.

As to the position of the patient, I do not know that it makes any difference whether she is in Sims' or the dorsal position. I prefer, however, the patient in the dorsal position with the Hunter Robb strap, which is simply a padded belt about four feet long, which passes over the shoulder and fastens around each leg just above the knee. The patient should be placed on a table of proper size, in a good light. This procedure should never be attempted in bed except as an extreme necessity, when the leaf of a dining-table, slipped under the mattress and patient, will keep the buttocks up and make it possible to work, though unsatisfactorily. This may seem to you a needless observation, but I assure you I have seen it attempted many times by different practitioners; and I am sure it is much more difficult to do, and the work consequently not so well done.

With the patient in position, the vagina and vulva are carefully cleaned with green soap and cotton mops, then irrigated with bichloride, or not, as preferred. If bichloride is used, and the vagina is small and

in addition contracted by the bichloride, a very little green soap will overcome this; shaving is omitted.

In these cases we usually have little difficulty in dilating the cervical canal, although, as I have mentioned, I have had two unfortunate results. As soon as the canal is dilated, which must be sufficient to allow a free outlet for the irrigating fluid, I try to locate any placental or adherent tissue and, if I am successful, always use the forceps to remove it. The heart-shaped forceps of Sims is most useful in these cases, as we can more easily and quickly remove the material, and the hæmorrhage is very much less than when removed with the curette. After this has been done, or if I am not successful in locating any placental tissue, I then use a good-sized Rhamstetter's irrigating curette; after this, a small sharp curette, carefully going over the walls of the uterus, slowly and methodically. By doing this one is almost certain not to miss any adherent tissue. Usually we can determine when the uterus is clean by the ring of the curette; this, however, is not always possible because, in the very severe cases where the uterine walls are soft and non-resisting, it cannot be determined. In such cases we must be very cautious, as with a little carelessness the curette will very easily penetrate the uterine wall.

After the scraping is done, my routine practice is to use a hot solution of bichloride, one to two thousand, followed by a saline solution of sterile water, then pack with iodoform gauze. If a large quantity of iodoform gauze is to be used, it is well to wash the gauze, to prevent iodoform poisoning; the quantity of gauze is determined by the amount of hæmorrhage and the size of the uterus. I am aware that many swab the inside of the uterus with pure carbolic acid, or carbolic acid and iodine. I do not use either in routine practice, though I have occasionally used pure carbolic acid, thinking to control absorption; but if the uterus is clean there is no indication for its use.

If the above is carefully and conscientiously done, it is all that is necessary in the majority of cases. Though in late cases, where there is or has been a virulent infection with marked systemic manifestations, and the pelvic tissues outside the uterus are involved, I believe it is well to supplement the curettage by an incision through the cul-de-sac, posterior to the uterus, and drain with iodoform gauze, after the suggestion of Pryor. I remove the gauze from the uterus at the end of twenty-four hours and usually do not replace it. If a colpotomy has been done, I leave the gauze for forty-eight hours and replace it as the case progresses.

I have been embarrassed several times with a class of cases, per-



haps it would be well to mention, *viz.*: an abortion of from four to six months with septic symptoms demanding prompt curettement, the cervical canal being hard and firm, not dilated or easily dilatable to the extent of allowing the removal of the fœtus. These are very tedious and difficult cases; and while in my earlier practice I did succeed in removing the contents of the uterus after a fashion, I now do not make the same effort to dilate the cervical canal instantly with dilators, but prefer to pack the canal with sterile gauze, after the proper aseptic details have been carried out, and find my work very much easier to accomplish after a few hours and with very much less traumatism.

As to the instruments required in detail, I have little to say; every operator has his own ideas. I will not detain you with mine, further than to mention the curettes and forceps I use. I prefer a sharp curette, whether used with or without irrigation; I concede that one may do harm with a sharp curette if used carelessly, but not otherwise. Of forceps I have two pairs; one known as Sims' placental forceps, which is heart-shaped and with which we can remove any material in the uterus, whether situated in the cornua or otherwise; the other is a very similar instrument, only heavier, with pegs or teeth between its jaws. This is very serviceable if a fœtus of several months must be removed and the canal not well dilated; it will not slip, as you will observe. I had them made after a very embarrassing experience in trying to treat such a case.

In conclusion, I would ask the privilege of emphasizing the necessity of a thorough appreciation of the pathological conditions present in these cases; and, if found prudent to curette, that it be done in a careful, conscientious manner, under a rigid aseptic technique.

511 Broadway.

---

## A SOLID OVARIAN TUMOR.\*

BY JOHN G. EARNEST, M.D., ATLANTA, GA.

Miss M., aged 32, unmarried, was seen June 24, 1900. She was a very small woman, with a narrow pelvis, had been gradually losing flesh for several months until she had become greatly emaciated; had for months past had fever every day. There was constant pain in the pelvis, and she was very despondent, worn out, and exhausted. She had a constant watery diarrhoea, which was occasionally interrupted by a few days' constipation and accompanied by great abdominal distention. This condition, when occurring, was relieved with difficulty, requiring active purgatives and free use of enæmas. Nausea was a distressing factor. Temperature was, when first seen, 102 degrees. The menses had been regular until the last two months, when she began to have a little show at irregular intervals between the periods.

When the abdomen was uncovered a mass reaching above the umbilicus was observed. It stood out prominently in the median line, was perfectly symmetrical, smooth, and hard. Was firmly fixed, so that it could not be moved. The dark line down the center of the abdomen was unusually pronounced. The examination, per vaginam, was somewhat hampered by an unruptured hymen and tenderness due to the local peritonitis, but I found the cervix pointing forward, low down, and twice its normal size. The uterus was retroverted, firmly fixed, and apparently continuous with the superimposed tumor. The rectal examination seemed to confirm the view that the uterus and tumor were parts of the same body. The fundus uteri could not be reached through the rectum. I believed it to be a uterine fibroid. She declined operation until she could go to her home and build up under the care of her family physician. This she did, returning August 1st. On August 3d I opened the abdomen. There was a small amount of light yellow ascitic fluid. The abdominal peritonæum was mottled with dirty brown. To my surprise the tumor showed the pearly luster of an ovarian tumor. It had so grown that it seemed to be caught under the promontory of the sacrum, and was adherent to the pelvic wall. It was gotten out of the pelvis with some difficulty. The pedicle was from the right side and comparatively small. The tumor,

\*Read before Southern Surgical and Gynæcological Association at Atlanta, 1900.

when removed, was found to be ovoid in its general outline, with an indenture corresponding to the promontory of the sacrum, measured twenty centimeters in length, and about fourteen in breadth at widest point.

When cut open, the appearance was very much that of an ordinary uterine fibroid, and the tissue was quite dense. The cortex was united to the tumor by a thin layer of cellular tissue infiltrated with serum. I am sorry to add that no microscopic examination was made.

I at first supposed it to be sarcoma, but a careful examination showed the fibers to be distinct and arranged in irregular whorls, just as we see them in uterine fibroids, and the tissue was quite as hard as any fibroid, and absolutely solid without a break. Recovery was uninterrupted. Judging from my own experience and the published experience of the most prominent operators of our time, ovarian fibroids of such dimensions as this one must be exceedingly rare.

## AN UNIQUE CASE OF INTRAPELVIC HÆMORRHAGE DUE TO A HITHERTO UNDESCRIBED NEW GROWTH.\*

BY W. P. MANTON, M.D., DETROIT, MICH.,

‡ Gynæcologist to Harper Hospital, the Eastern and Northern Michigan Asylums for the Insane;  
Prof. of Clinical Gynæcology and Adjunct Prof. of Obstetrics, Detroit College of Medicine,  
etc., etc.

Although intrapelvic hæmorrhage was mentioned by Ruysch as early as 1691, there appears to have been no successful systematic attempt at differentiating the various conditions leading to the blood effusion until the observations of Bernutz and Goupil, whose classical memoir was translated into English in 1866. These authors first directed attention to the fact that hæmorrhage within the pelvis is not a "specific disease" but merely a symptomatic expression of morbid conditions existing within the pelvic structures, and demonstrated from careful and painstaking necropsies that blood extravasations in this location may take place not only as the result of "extra-uterine ovulation," but also from a variety of other causes unconnected with pregnancy. Unfortunately, although the cases cited by Bernutz under the caption "*Peri-uterine Hæmatocele*" are so clearly described that no

\* Read before the Southern Surgical and Gynæcological Association, November 13-15, 1900.



doubt can be entertained as to the conditions detailed, he failed to recognize the circumstance pointed out by Hugier in 1851, that intrapelvic hæmorrhage may be either intra- or extra-peritonæal, a fact which was particularly emphasized by Lawson Tait nearly forty years later, and is sufficiently well known at the present time. The determining of the location of the blood effusion, whether it is *free*\* within the peritonæal sac or *circumscribed*\* outside of that membrane is of the utmost importance, since upon this fact alone must be based the line of treatment to be inaugurated.

The assertion of Tait that all intraperitonæal hæmorrhage is of ectopic gestation origin became at once so generally accepted that the teachings of the older writers were soon forgotten, and it is only within the past few years that clinical and pathological investigation has re-established the fact that, however rare, other morbid processes may be active in the causation of this condition.

So, too, in the extra-peritonæal form of this disorder, it is well-established that tubal pregnancy, the sudden arrest of the menstrual flux, and the traumatisms incident to abdominal operations, are not the only factors concerned in the production of this hæmorrhage, but that this may take place in a variety of local lesions as well as in certain general somatic diseases. I am not aware, however, that extra-peritonæal pelvic hæmorrhage due to a distinctly pathological new growth developing in the lower portions of the broad ligaments and progressing upward with involvement of the tubes, and giving rise to marked degenerative and destructive changes in the blood vessels of the part, has, hitherto, been described. On this account the following case is entitled to consideration, not only because unique, but also as not devoid of clinical and pathological interest and importance:

M., aged 33, married, one child eight months ago, no abortions, was first seen October 13, 1897. Menstruation had always been irregular, profuse, had increased in amount since marriage, and often lasted two weeks. Pain was sometimes, although not always, present. During pregnancy she was in poor health. Her labor was long and tedious, and was finally terminated by forceps. She states that she was "torn" at the time. She got up on the tenth day following delivery but fainted and was again confined to bed for four days with

---

\* The words "free" and "circumscribed" were suggested by my friend Dr. Marcus Rosenwasser of Cleveland, O. as best indicating the location and nature of an intrapelvic hæmorrhage. It would be still less confusing, it seems to me, if intraperitoneal hæmorrhage alone was known as hematocele, and extraperitoneal blood effusion only as hæmatoma, as is adopted by the Germans.

"fever." Convalescence was protracted and she failed to regain her former health. About eight weeks ago—that is, six months after childbirth—she began to flow, and suffered from severe abdominal pains, particularly in the left side, which drew up and cramped the leg, together with pain in the back "which nearly killed her." She was seen at this time by two physicians, who prescribed without affording relief, and who failed to determine the cause of the condition. Two weeks ago she was seen by my colleague, Dr. Angus McLean, who succeeded in checking the uterine flow and discovered the presence of an abdominal tumor. The patient was sent to Harper Hospital and, through the courtesy of Dr. McLean, placed under my care.

Status præsens: Patient is a brunette, of medium height, feeble, emaciated, and pale, with drawn and anxious features, as if she had recently undergone a serious illness. The stomach is irritable and she is unable to take food in large amounts. There is no history of varicose veins.

Examination: Abdomen not much distended; parities thin. The lower portion of the vagina is partially blocked by a swelling on the left side, which extends downward to within about an inch and a half of the introitus. The uterus is slightly enlarged, acutely anteflexed, and pushed to the right. The right pelvic fossa is occupied by a softish mass, but the parts are so exquisitely sensitive that its nature cannot be accurately determined. To the left of the uterus the tube can be made out, greatly enlarged, elongated, sausage shaped, somewhat irregular, and hard. Continuous with the tube is a yielding mass which completely fills this half of the lower pelvis, and extends downward beside the lateral vaginal wall, causing the part to bulge into the lumen of that canal as noted.

Diagnosis: From the history of the case and the examination the nature of the condition was not clear, and the diagnosis was left open. I was inclined to believe, however, that we had to deal with either an ectopic gestation which had ruptured into the broad ligament, the accompanying hæmorrhage distending the two leaves of the peritonæum, or a pus-tube with exudate and effusion of blood or serum. The patient was kept in bed for the next ten days and an effort made to improve her general condition.

Operation: October 23, before the students of the Detroit College of Medicine. On opening the abdominal cavity both sides of the pelvis were seen to be symmetrically involved, the tubes were enlarged to the size of small bananas, and were attached to the pelvic wall and intestines by numerous adhesions, mostly recent, but some old and dense.

In attempting to enucleate the left tube, the wall of which was very friable, it ruptured, and a quantity of dark fluid blood welled up from below. The tube was tied off close to the uterus with formalin cat-gut and removed. A large cavity in the broad ligament extending deep into the pelvis and filled with old liquid blood and clots remained. The right tube was also ligated and cut away, the same condition of the ligament existing as on the opposite side. The patient was then placed in the Trendelenburg position and more than a pint of liquid blood and clots removed by hand and sponging from each broad ligament cavity. There was no fresh oozing from the torn adhesions or from the ligaments. It is estimated that nearly four pints of blood and clots were contained in the two broad ligament hæmatomas. The edges of the severed leaves of each broad ligament were then stitched together with kangaroo tendon, a glass drainage-tube placed in each cavity, the peritonæum cleansed, and the abdominal incision closed.

The patient left the table in good condition. The drainage-tubes were removed about the middle of the second day, 67½ drachms of bloody serum having been withdrawn. Metrostaxis began at the close of the first day and became quite profuse on the third day, but was then easily controlled. During the night of the second day the patient's right internal ear became painful and discharged a "highly colored fluid." This continued for several days, but was gradually checked by syringing with a warm boric-acid solution. The temperature remained practically normal until the beginning of the sixth day, when it gradually rose to 103°, remained high, between 99.8° and 102° for several days, and then gradually declined. No specific cause could be found for this elevation at so late a period of convalescence. During this time the pulse varied considerably, ranging between 84 and 130. The general condition was, on the whole, good. During nearly the whole period of convalescence the patient's stomach remained quite irritable, and vomiting took place at intervals up to the ninth day. Finally an excellent recovery was made and the patient was discharged in good condition after nearly six weeks of hospital residence. Mrs. M. has been seen at intervals during the past three years and has remained in good health, no return of the pathological condition giving rise to the hæmorrhage having at any time been manifested.

The parts removed were sent up to my friend, Dr. Heneage Gibbes, then Professor of Pathology at the University of Michigan, for examination.



*Dr. Gibbes' Report.*

"The morbid conditions in the case are brought about by the growth of a tissue which has a fibroid character. From the appearances presented by a number of sections taken from different parts on both sides it seems that this new growth originated in the broad ligament.

"The character of the growth varies as it becomes older; in those parts where it is growing rapidly and encroaching on normal structures it is composed almost entirely of cells; at a later stage a fibrous matrix is formed, in which the cells are embedded, and in the oldest part of the growth this matrix resembles dense fibrous tissue with spaces in which lie the cells, varying very much in shape, some being oval, others stellate, while a few are multinucleated. In some parts the cells have

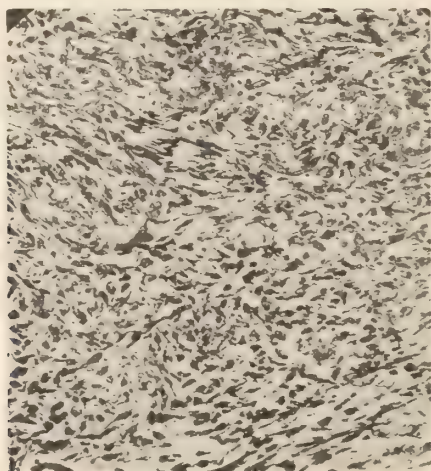


FIG. 1.—New Growth.

become disintegrated and have dropped out, leaving empty spaces, while many free nuclei are seen in the tissue. In the older parts the fibroid tissue has a tendency to become arranged in bundles running in various directions. The new growth is well supplied with blood vessels, mostly capillary, which are irregular in size and direction. This new growth resembles some forms of recurrent fibroids which I have examined.

"There is no doubt whatever that the aneurismal dilatations on both sides had the same cause, as all the sections show a new growth of

precisely similar character, but that on the right side is probably younger than that on the left. This bilateral occurrence would negative the idea of a malignant neoplasm. The effect of this growth in all the parts involved is to absorb the normal tissues and replace them, and this process is well shown in many of the sections where the transition from normal to new growth is quite abrupt. One characteristic of the growth, and the one that has brought about the condition in this case demanding operative interference, is its action on the blood vessels. All through the sections the same condition is found, varying from a

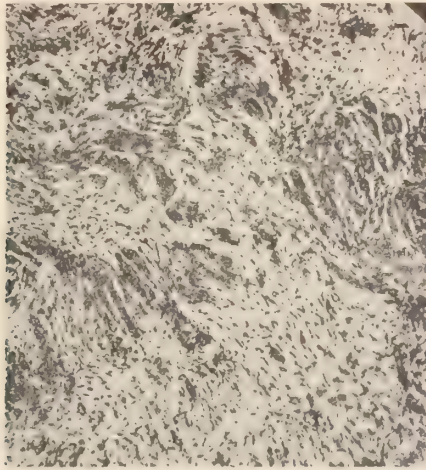


FIG. 2.—New Growth encroaching and absorbing Normal Tissue in Broad Ligament.

small hæmorrhage to a large extravasation, the rupture of some vessel and the filling of the spaces in the surrounding tissues with blood corpuscles. It is very evident that the encroaching growth in some way increases the blood pressure in the capillaries of the normal structure, as they are found much distended in some places and ruptured in others.

“In other parts the new growth forms the wall of a cyst containing blood in various stages of disintegration, showing that a large vessel has become involved in the growth. The aneurismal dilatations in both broad ligaments have, in all probability, been formed by the occlusion of large vessels by the degeneration of their wall owing to the growth of a fibroid material, as is well shown in the walls of the large

and small arteries, and more especially in the valves and walls of the large veins. Many arteries are completely filled with clot in their neighborhood. The same condition is seen in cases of senile gangrene of the leg where the anterior and posterior tibial arteries and veins are affected in a similar manner.

"In the present case the morbid change has probably been a very slow one. The peculiar effect of the new growth on the circulation is shown in one of the sections of the ovary on the right side, where a large clot is seen in a vein at the spot where the new growth impinges on the ovary, although the vein, evidently, runs in the broad ligament. Several large clots were found in vessels in the broad ligament, and they

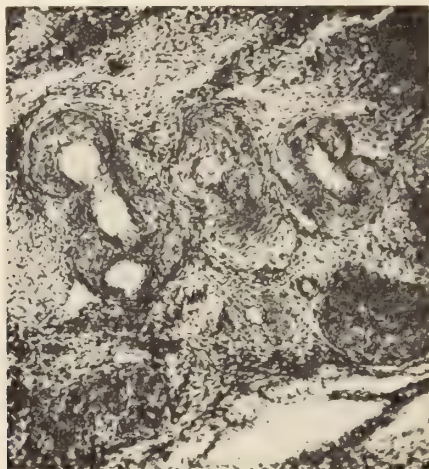


FIG. 3.—Hilus of Ovary, Arteries, Walls thickened by Degenerative Changes.

are all of the same character—homogeneous—and from their reaction to the stain probably containing lime salts. The large clot in the right ligament is mostly old, although here and there were small masses which shelled out and were composed of recent blood.

"Both ovaries show the same morbid changes, dilated Graafian follicles forming small cysts, areas of hyaline degeneration varying in size very greatly, and a homogeneous degeneration of the walls of the arteries, which is especially well marked at the hilus.

"I do not think that these changes have any connection with the new growth in the broad ligament, as I have seen exactly the same

in many cases where the broad ligament was in a perfectly normal condition.

"The degeneration of the walls of the arteries in the hilus being, however, rather more pronounced than I have seen before. This new growth appears to have some influence on the normal structures before it actually reaches them, as is shown by the ruptured vessels, hæmorrhages, and, as is shown in one slide, commencing degeneration of the cells forming the ovarian stroma.

"There is also a fibroid thickening of the periphery of the ovary, which extends all around its circumference; this resembles fibrous tissue more than the new growth. The occurrence of a bilateral growth producing such extensive, yet similar, changes makes this an exceedingly interesting case.

"HENEAGE GIBBES."

The above report suggests the question of treatment; what would have been the subsequent course of the condition had the vaginal route been selected for the evacuation of the hæmatomas and the diseased parts left, or subsequent abdominal operation elected?

From the history of the case, the operation find and the microscopical examination, it is evident that the disease was progressive, and had the broad ligaments simply been emptied of their mass of blood, the same condition of affairs—that is, repeated hæmorrhages—would have continued, possibly terminating in the patient's death.

By the complete removal of the parts in which the pathological process was in active progress the disease was checked and the woman restored to health. Although this case is possibly unique, it certainly teaches the lesson that no one method of procedure should be adhered to in the treatment of either free or circumscribed intrapelvic hæmorrhage, and that extra-peritonæal blood effusion should not be left to take care of itself, whatever the cause, in the majority of cases.

32 Adams Avenue W.

---



## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

---

## EDITORIALS.

### DOCTOR EMMET AND THE WOMAN'S HOSPITAL.

It is a matter of more than common interest—of that interest always attached to the decisive acts of prominent men—that Dr. Thomas Addis Emmet has recently severed his connection with the Woman's Hospital in the State of New York.

In October of last year he resigned his position of Senior Attending Surgeon, in the plenitude of his powers as a teacher and as an operator and after a continuous service of forty-six years.

The interest of the profession in this connection lies in the fact that to Dr. Emmet alone the Woman's Hospital, as an institution devoted exclusively to the diseases of women, owes not only its reputation, its unique distinction but its very existence.

When Dr. J. Marion Sims hurriedly sailed to Europe at the beginning of our Civil War (for he had been indiscreet in his expressed sympathies for his countrymen of the South) he left behind him in Dr. Emmet the only man in this country who had either knowledge or interest in gynæcology, as a specialty, as well as the only man capable of conducting the Woman's Hospital on any lines except those of general medicine or surgery.

To Dr. Emmet's personal efforts alone does the Hospital owe many of the State appropriations which it has enjoyed and in one instance he obtained by his unaided efforts the passage of a bill by the Legislature which made the Hospital richer by \$30,000. Quite recently, it was due to Dr. Emmet's influence that permission was obtained from the Board of Aldermen of this City to sell the present site of the Hospital (which had been deeded by the city) and to buy another site for new buildings which it was then proposed to erect.

The unique distinction which this hospital once enjoyed, as the birthplace and home of plastic surgery and gynæcology, was also due, after Dr. Sims, to Dr. Emmet. And, without doing injustice to the former, circumstances so arranged it that not by Dr. Sims but by Dr. Emmet only was a knowledge of plastic surgery, as a distinct and scientific specialty, made known from this hospital to the world at large.

For, to-day, while Dr. Sims is and will always be the Father of Modern Gynæcology, of all his work but three things remain connected with his name—the Sims' speculum, the use of silver wire and the operation for the closure of vesico-vaginal fistula.

From the Woman's Hospital Dr. Emmet has produced, as his original contributions to gynæcology, plastic operations for the cure of laceration of the cervix, for rectocele, for cystocele, for recto-vaginal fistula, for laceration and prolapse of the urethra and operations for the cure of pelvic abscess, of intra-uterine fibroid, of hæmatocele, of retained menstruation, of occlusus vaginæ and many others of less note.

He also made the first attempt to shut out the stump of the uterus from the peritonæal cavity in hysterectomy and he alone has performed those marvellous operations of patience, mechanical ingenuity and plastic skill by which, although the whole anterior wall of the vagina, the entire base of the bladder and all the urethra have sloughed away, he has closed the bladder, restored the vagina, built up a new urethra and given retentive power. He invented all the surgical scissors now in use as well as nearly all the other surgical instruments used in plastic gynæcology. His principles and practice in regard to pelvic inflammation have been applied to the cure of thousands upon thousands of women in that institution.

For ten years after the departure of Dr. Sims, at the beginning of the Civil War, Dr. Emmet was the only Attending Surgeon at the Woman's Hospital, which was the only special hospital in the world for these diseases as was Dr. Emmet the only man who was exclusively a specialist in this country. During these years men flocked to his clinical lectures from all parts of the world and to them he imparted his knowl-

edge, as he gained it, in this hitherto unknown specialty. Indefatigable were his efforts to impart to the younger men all that he knew and many a man now advanced in years still remembers this fact.

Thus we see that the Woman's Hospital and the name of Dr. Emmet were for many years interchangeable terms and, wherever Dr. Emmet might have been, *there* would have been the Woman's Hospital.

With Dr. Emmet's resignation no surgeon who took part in its early days of struggle or in its later years of greatest prominence and activity now remains upon its Attending Staff. Curiously enough, although the Woman's Hospital owes so much to Dr. Emmet and to the original work which he there brought forth and taught, no man at present connected with that Institution is in any sense his disciple and his mantle has not fallen there.

It is not to the Woman's Hospital, then, that Dr. Emmet has left as a heritage his knowledge and skill but to trained and earnest gynæcologists, wherever they may be scattered throughout the world. It is they who will preserve, in their practice and in the pages of history, his name and fame.

---

### "BREAD UPON THE WATERS" RETURNED.

In last month's issue of this Journal we called attention, in an Editorial entitled "*Bread upon the Waters*", to a flagrant literary piracy committed upon our abstract columns by the quarterly publication, *Progressive Medicine*.

Dr. Richard C. Norris, of Philadelphia, though his name did not appear in our editorial, was responsible for this amazingly wholesale appropriation of another's work and property. Dr. Norris has always had our warmest esteem and our personal relations with him have been of the friendliest and most cordial character. It was therefore with chagrin, as well as natural indignation, that we realized that his name appeared as the responsible author of these pirated abstracts. Still, in fairness to this JOURNAL, as a protest against an especially mean form of dishonesty and in justice to a Sub-Editor on our staff, whose conscientious labor translated and produced these much-admired abstracts, we felt that personal consideration for the author should not deter us from a forcible exposition of the injustice perpetrated.

We rejoice to inform our readers that we have received a letter from Dr. Norris in which he declares his amazement to find that our strictures were just and he adds a satisfactory explanation, which

many another honest man has had to plead. It is the old story of the "hireling" taking the place of the "shepherd." Dr. Norris being obliged to go to Europe last summer before his work in *Progressive Medicine* was finished entrusted its completion to another physician whom he knew to be capable and evidently believed to be honest. The abstracts stolen from this JOURNAL were all contained in the work thus done for him by another and Dr. Norris suffers for his responsibility.

We are indeed glad to have received this explanation and we extend it freely (although Dr. Norris has given us no hint of such request or desire) to all our readers who doubtless felt equally shocked as did we ourselves that a man of Dr. Norris' prominence and excellent reputation should apparently and technically be guilty of such an act.

We present our sincere compliments to Dr. Norris.

---

#### THE PHILADELPHIA MEDICAL JOURNAL.

We extend our earnest sympathy to Dr. George M. Gould, late Editor of *The Philadelphia Medical Journal* for the undeserved treatment which he has received at the hands of the lay owners and publishers of that periodical.

We confess, however, that we experienced no sensation of surprise; we have long known, as Dr. Gould should have known, that "the leopard cannot change its spots."

It is unreasonable to expect laymen to understand or to sympathize with any scientific enterprise except through the channel of dollars and cents. The injustice to Dr. Gould is due merely to the fact that, endeavoring to serve medical science and independent medical journalism, he could not serve lay mercantile interests at the same time.

So it will ever be. The professional and scientific interests of medical journalism must always become subordinate to the exigencies of trade and must always be submitted to the business standards of laymen so long as the capital of the latter only patronizes scientific expression. There is no hope of change, and there can be none, until medical journalism be supported independently by the medical profession.

We extend Dr. Gould our sincere good wishes for the success of his proposed new venture in medical journalism,—if, and only if, he



take this lesson to heart and start his new journal on a financial basis that cannot be shaken by lay control. One "cannot sit on two stools" at the same time and we hope sincerely that Dr. Gould, a sincere man of great capability as a journalist, now sadly realizes that he cannot serve his profession and lay masters also in medical journalism.

It is stated that already, in the first ten days following the announcement of this new journal of Dr. Gould, nearly two hundred physicians have subscribed for Founders' shares and over thirteen hundred others have taken stock or subscribed otherwise. Surely no journal could be inaugurated under brighter auspices than this and with Dr. Gould rests the opportunity to make his Journal not only an organ of immense personal benefit to the profession but also probably the most powerful instrument for uniting and organizing medical journalism in this country.

---

### MEDULLARY NARCOSIS.

What the final status of the new method of medullary narcosis will be it seems increasingly difficult to say, as further reports and opinions multiply themselves. The *Philadelphia Medical Journal* devotes the greater part of a recent number to articles upon this subject and to reports of cases. In general the technique of the different experimenters has come to be nearly uniform. The fourth lumbar space is almost invariably chosen as the site of puncture, largely perhaps because it is easily located; Matas, however, says that it is not always the best point and, failing in two cases to reach the subarachnoid space thereby, he tried the second space in one instance and the lumbo-sacral foramen in the other, both with success; he asserts that these spaces or any of the intermediate ones may be utilized and there seems to be no anatomical contra-indication. It goes without saying that absolute asepsis is imperative and all are agreed that a few drops of the cerebro-spinal fluid should flow from the needle as an indication that its point is in the proper place but that only a very small quantity should be allowed to escape. It also appears to be important that a needle of small calibre should be used; Golden attributes two failures (his first cases) to the probability that the large size of the needle permitted the cocaine to leak out between the membranes and the bony canal. Too much cannot be urged against the employment of large doses; two centigrammes have given rise to alarming symptoms in several cases and it would

appear that this amount should certainly not be exceeded in a single dose. Matas, indeed, says that he has obtained his best results from the combination of  $\frac{1}{5}$  grain cocaine hydrochlorate,  $\frac{1}{40}$  grain morphine hydrochlorate and  $\frac{1}{5}$  grain sodium chloride, dissolved in 20 minims of water, for the ready preparation of which he uses the tablets sold for the making of the Schleich solution No. 1. His idea is that the morphine prolongs and intensifies the action of the cocaine and controls nervousness and excitement during the operation rather than that it relieves post-anæsthetic phenomena; and he considers the results from this combination so much more satisfactory that he expects to substitute it regularly for the simple cocaine.

To what the unfavorable symptoms are due, whether altered tension of the cerebro-spinal fluid, introduction of foreign substance or toxic action of the drug itself, appears still to be a matter of doubt. Marx, who is perhaps the most enthusiastic advocate of the new method, especially in obstetrics, believes that the dangerous symptoms are due to acute anæmia of the brain produced by the cocaine itself and that it is particularly safe in the parturient state for the same reason that chloroform is supposed to be safe at that time, *i. e.*, on account of the normal cerebral congestion of pregnancy. He has never observed any severe symptoms, such as sometimes occur in surgical cases, and such symptoms as he has noted he has ascribed to operative shock. The disagreeable manifestations that occurred in former cases he thinks may be controlled by bromides, hyoscine hydrobromate and nitroglycerin; he thinks that other drugs are useless but that patients whose stomachs have been empty for some time prior to the narcosis are much less liable to nausea and vomiting. Medullary narcosis may be used to secure a painless first stage; it would be valuable in cases in which ether or chloroform was contra-indicated and particularly so where narcosis of any kind for operation was imperative and no assistance could be had. Marx has done every obsteric operation, except symphysiotomy and Cæsarian section, with this method; dilatation of the cervix is rendered especially easy. He admits, however, that most other operations are not done with so much ease as with chloroform anæsthesia; and if that be the case, we certainly fail to see why, except under special conditions, cocaine should be preferred.

Keen used cocaine by this method in a man of fifty-one years in an operation for hernia, partly on account of bad kidneys, partly because, the intestines having been in the scrotum for twenty-seven years, it was feared that their return to the abdominal cavity would result in considerable embarrassment of respiration, which might have

been masked under profound general anæsthesia; whereas, with the patient conscious, the question of reëstablishing the hernia could be decided more wisely. Keen was well satisfied with the method in this instance but believes that it should be used only in restricted cases.

Bainbridge in the *Medical Record* has reported seven cases in children, ranging in age from two and a half to eleven years; the operations were for exploration of the hip-joint, umbilical entero-epiplocele, tuberculous caries of the ilium, talipes equino-varus with genu valgum, lumbar kyphosis with large psoas sinus and tuberculous osteitis of the head of the tibia. In the fourth case spinal anæsthesia was induced on three separate occasions, the first and third times with cocaine, the second time with eucaine. None of the cases showed other than temporary after-effects but in the sixth case these were somewhat serious; on account of the deformity the puncture had to be made between the twelfth dorsal and first lumbar vertebræ. Anæsthesia was successful but the child was restless at intervals upon the day following; on the second day he seemed stupid and unable to express his desires in words, could not move the right arm and leg, kept his legs drawn up and had a rapid and feeble pulse; these symptoms slowly improved but it was not until the thirteenth day after the operation that he could be considered entirely normal. It may be added that at the time of operation the patient's general condition was bad.

A. M. Phelps is even more guarded in his opinions. Among other things he says: "Let these experiments be done by men of mature judgment, of long experience, of clear heads." This seems to us excellent advice but who shall decide whether the would-be experimenter has all these qualifications? Himself? That the method has in certain cases been responsible for fatal results it seems futile to deny; in still more cases alarming symptoms and in nearly all unpleasant ones have presented themselves. As regards the merely unpleasant complications, they probably are not worse than those that follow ether narcosis; while of the serious and fatal results we cannot say that they never occur with the ordinary anæsthetics or that they are more marked or frequent than would be the case with the latter, were these of equally recent introduction. In fact, a number of fatalities followed the present everyday use of cocaine before its administration and the dangers were thoroughly understood. At all events it would seem unwise, even for purposes of experimentation, to substitute a method whose dangers cannot well be estimated for those that are safe in the main and whose dangers are understood, except in the cases in which it is fair to anticipate these latter dangers or where other special reasons may exist.

While this is not the most rapid and brilliant way of reaching conclusions, it has the advantage of the greatest safety possible. There are always over-enthusiastic investigators, sometimes, it must be admitted, rash ones, who are willing to take undue chances with the lives of their patients that they may be in the forefront with some new thing. We should hesitate to impute the latter motive to those whose writings on the subject we have read; we would only urge that the cases be chosen with care; should preferably be those in which some special indication for this method exists; that most careful and detailed records should be kept, even, as suggested by Hopkins, that every patient so treated should be kept under observation for a year; finally that there should be no hesitation about reporting unfavorable and, particularly, fatal results which, it is true, sometimes requires courage but is the plain duty of the conscientious physician.

---

## CORRESPONDENCE.

### SPECIAL JOURNALISM AND THE GENERAL PRACTITIONER.

[We have received the following straight-forward and practical, and therefore valuable, communication, which we herewith publish, together with our reply to the honest though mistaken strictures upon an editorial which recently appeared in this JOURNAL.

Our correspondent's letter points out a sad, injurious and unjust condition of things, which really exists and will probably increase in severity and yet, as the profession of medicine and its practitioners now stand in their mutual relations, medical journalism must either maintain its standard of scientific excellence (with, according to our correspondent, a commensurate financial loss) or, on the other hand, it must truckle to the ignorance, in the matter of special branches of science, and untoward surroundings of country practitioners and to their natural desire and often necessary effort to retain all the emoluments irrespective of special fitness or desert.

In our answer to our correspondent we point out the difficulty of the situation as well as the deep causes which have made this situation possible and which, until they be eradicated, will maintain it.]



DAVID CITY, NEB., January 7, 1901.

*To the Editor of the American Gynecological and Obstetrical Journal:*

DEAR DOCTOR:—When I received the last issue of the AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL I read your Editorial and, as I am very much interested in American Medical Journalism, I take the liberty to send you a comment about your article. I do not mean it for publication but you can do with it what you think best. I have watched the spirit of the times since I have been in practice and have noticed several changes that are being wrought out. You complain about the apathy of physicians towards your JOURNAL but this is only very natural. You know very well that there is a tendency towards specialism and that all kinds of specialists are daily taking away the practice of general practitioners, not only in the cities but in the country as well. Whenever there is any severe case and a physician calls a specialist in consultation, the next thing that happens is that the patient is in some city hospital and the country physician is minus his practice. The patients' friends go to hospitals themselves afterwards when anything is needed and the physician is minus practice again. All cities swarm with all kinds of specialists, who have their societies where they read very learned papers and insist that all paying practice should go to them. They publish their papers in the journals and expect physicians to read them but what is the advantage in reading them when the sum of their efforts is to tell country practitioners to send all their paying cases to city specialists and to keep only measles, whooping cough and "colds" for themselves. Now even constipation has its specialists in proctologists and the latter expect to get all the cases from the country. And so the physician will soon be nothing more than a gratuitous distributor of cases to specialists from whom he gets nothing but broad smiles, patting on his shoulders and empty praise, for all of which he cannot buy even a loaf of bread.

You may wonder why I write this as a comment on your article. Your JOURNAL is one of those that publishes transactions of several such special societies. Those transactions and the articles are certainly scholarly and learned and are very interesting for the members of societies for specialists but how much good do they do to the country practitioner? They all culminate in: "You cannot properly treat such cases in the country, you must send them to us; it is your duty toward your patients." This is certainly right so far as patients and specialists go but has the general practitioner no rights himself? Is he to simply send his patients away and himself starve? This is why general practitioners do not care for such papers. They want something in which they can learn how to treat the cases themselves; they want

some journals from which they can get information that will enable them to treat their patients properly at home without sending them away, except in rare cases. I do not mean to say that it is you that disseminates this tendency but the writers in your and all such journals do this.

Such special journals are full of great operations and their technique but they all say: "Do not do these yourselves but send them to us, as we have hospitals at our disposal where they can be properly done; you have not." Therefore there is nothing in such journals to interest the general practitioner; there is nothing in them that he can do himself or he is discouraged to attempt them; hence he does not care to read them and consequently does not care to pay for them. Give the general practitioner something in your JOURNAL which he can use, give him some sound advice as to how to treat his gynæcological cases at home, make it interesting for him so that he believes he cannot get along without it and then send the JOURNAL only to genuine subscribers who must pay in advance and you will see how quickly your subscription list will increase and you will make money.

Patients want to get well and do not care how their disease is called nor what are the hair-splitting minutiae of the pathology of their troubles. And for this reason physicians want a journal, where they can find how to treat the patients. Therefore, your JOURNAL is very good for specialties with high leading articles about great operations, of interest only to specialists, you cannot figure on support from general practitioners; but as soon as you will begin to make it interesting for general practitioners and give them wholesome advice on treatment, of such a character that they can do it themselves, then you will make it pay. I have stopped the JOURNAL only for the reason that I did not find much in there that I could use myself and I have no time to read about great operations for which I am not prepared. This is not meant as a reproach against the journal, which is one of the best technical journals of gynæcology published, but it is meant as an explanation why you do not get the desired support from country practitioners. Your journal is only for hospital specialists and does not interest the general profession.

Respectfully yours,

CHAS. H. BREUER, M.D.

January 17, 1901.

*Dr. Chas. H. Breuer, David City, Neb.:*

MY DEAR DOCTOR:— I wish to thank you for your letter discussing

my Editorial, for I appreciate the sense of justice and good will which prompts it.

I notice two points on which you lay stress which, in my judgment, show a misapprehension on the one hand of the chief purpose of my Editorial and, on the other, of the conditions which affect special medical journalism.

All my labors in journalism, from the beginning, have been directed towards one object—not the financial prosperity or large subscription list of my own Journal (these objects have always been secondary though necessary ones)—but the union in a corporate sense of the profession at large and primarily the increase in influence and power of the medical press. Medical journalism cannot become great and influential unless it be freely and willingly supported by the profession; the profession itself can never become a great united body capable of demanding and obtaining its proper status and sphere of influence in the State and society unless it have at its command a powerful and united medical press to voice its sentiments and to compel attention to its demands. This is the cause of my indignation against the supineness and indifference to their own interests of the medical subscriber.

In regard to the attitude of medical readers who, from their situation and surroundings are unable to accomplish for their patients the same amount of good which surgeons more happily situated can accomplish, I cannot help feeling that though your plaint be natural and forcible, from the standpoint of the less prosperously placed practitioner, it does not consider the rights and interests of the patient, which should be *first*. If patients with special diseases come to the great medical centers for the relief of their diseases rather than remain under the care of avowedly general practitioners at home, are they not right? and if the same and equal relief could be given them at home, would they not remain there? Again, is not this monopoly of knowledge and skill due to the disintegrated condition of the profession? If we were, in a corporate sense, so united and powerful that we could control and did control our own affairs, would we not demand that every member of our profession should have received equal opportunities for knowledge before entering our ranks and that he should show equal proof of his knowledge and ability before he would be admitted to the ranks of specialism? I think that special medical journals are right in presenting the best of which the specialty and specialists are capable. I can see no advantage to humanity nor to scientific progress in the endeavor on the part of medical journalism

to enable the general practitioner who is without special knowledge and skill to bluff his patients into the belief that he has both.

That many humble practitioners in obscure localities have sufficient knowledge and sufficient skill to treat their patients equally as well as could many so-called specialists in large medical centers, I do not for a moment doubt. And that it is a severe injustice, intensely resented by these local practitioners, that their patients leave them for the glamor of a wider reputation I grant you is true. But such men as these are the exception and not the rule.

Very truly yours,

J. D. EMMET, M.D.,  
Editor and Proprietor.

---

#### REVIEWS.

Obstetric Clinic. By DENSLOW LEWIS, Ph.C., M.D., Professor of Gynæcology in the Chicago Polyclinic; President of the Attending Staff of the Cook County Hospital, Chicago; President of the Chicago Medical Examiners' Association; Vice-President of the Illinois State Medical Society; ex-President of the Physicians' Club of Chicago; Consulting Obstetrician to the Florence Nightingale Home; Senior Gynæcologist and Obstetrician to the Lakeside Hospital, Chicago; Late Special Commissioner from the Illinois State Board of Health and the Health Department of Chicago for the Investigation of Municipal Sanitation in European Cities. Octavo, 640 pages. E. H. Colegrove, Chicago, Ill., Publisher.

This book consists of the stenographic reports of a series of 39 clinical lectures delivered by the author to students and practitioners in Cook County Hospital, Chicago. The stenographic reports are submitted practically as they were taken and all intent to produce a text-book is disclaimed.

To those who have attended the author's clinic it will prove a most interesting and instructive volume, but to the professor at large, naturally, it will not appeal as strongly as some of the numerous recent text-books on obstetrics. There are omissions, naturally, in a work of this kind, but it must be borne in mind that the object sought in these clinical remarks was to teach the management of obstetric cases and their complications, and never to present the subject in a didactic



manner. At the same time there is an abundance of interpolated matter, most instructive and interesting, on criminal abortion, infanticide, illegitimacy, restriction of venereal diseases, regulation of prostitution, and other medico-sociologic topics. M.

---

A Pocket Text-Book of Obstetrics. By DAVID J. EVANS, M.D., Lecturer on Obstetrics and Diseases of Infancy in McGill University, Montreal, Canada. Lea Brothers & Co., Philadelphia, Publishers.

Evans' Obstetrics is the latest of the series of pocket text-books, edited by Dr. Bern B. Gallaudet. Like the preceding volumes of this series, it has been written particularly for the medical student and young practitioner. The brevity and clearness with which the essentials of the subject have been set forth will readily commend this work to the beginner.

Normal labor and physiological conditions have been described at greater length than the rarer complications. The value of the book is enhanced by the many excellent illustrations, taken chiefly from the recent elaborate works on this subject.

The author and editor have been unduly modest in the title of this volume, for it has outgrown the pocket size, and is much more elaborate and complete than its name would suggest. While it does not claim to be a working guide, it is more practical and useful than many more pretentious works. M.

---

TRANSACTIONS OF THE BROOKLYN GYNÆCOLOGICAL  
SOCIETY.

Stated Meeting, January 4, 1901.

(*Excerpt.*)

*Intra-Pelvic Operations for Relief of Posterior Uterine Displacements.*

BY WALTER B. CHASE, M.D.

(See page 5.)

DISCUSSION.

DR. R. I. DICKINSON: Dr. Chase wisely excludes the question as to the relative merits of the Alexander operation and limits us to a discussion of those cases in which adhesions necessitate opening of the abdomen. The adhesions being broken up and other troubles corrected, how can we best make the uterus fast? The practice of Mann, or like operations, of doubling up the round ligament and fastening it to itself is radically defective in principle. Folding of the round ligament on itself will bring in contact peritonæal surfaces in which adhesions will occur in sero-serous apposition. We all know that these adhesions are evanescent in character, and of the wonderful way in which serous exudates clear up. The Dudley operation in which there is a denudation of the peritonæal surfaces is, of course, better in principle, and so is one with an opening in the peritonæum pulling out the naked ligament and shortening it. Even these adhesions will peel away sometimes.

The question of suspension *versus* fixation is an important one. There are cases in which the uterus should not be suspended, for this is not enough to correct the disorder for which the operation was done. In the worst degrees of prolapse ventral fixation should be done; in the milder degrees of prolapse, with a uterus that is mobile, suspension may be sufficient preceded by plastic work. Take a case of a woman past the child-bearing period, when the operation is done for **pro**-lapse or retroversion, fixation is the preferable operation. In suspension the danger of intestinal obstruction is theoretically greater; yet, practically, few cases have been reported. I think Jacobs reported the first instance, Winter the second, and I have only run across five cases in literature.

We now have a sufficient number of cases to enable us to state that,

in ventral suspension, or shortening the round ligament, or vaginal fixation, eight to ten per cent. will relapse. This obtains whether you use silk or chromicized gut, or sutures that can be absorbed after a moderate length of time. I had an unpleasant experience where plain gut instead of chromicized gut was handed me by the nurse with the result that there was a prompt relapse. Ligating the tube with the hope of thereby preventing pregnancy has proved to be a fallacy. If we simply ligate the tube it may re-open. Dr. Reis published a series of such cases. Nothing but the removal of the tube deep into the uterus will cause sterility in these cases.

It is a question of great moment as to what happens in women when in a pregnant state after these operations; my personal experience has been that there is more discomfort connected with pregnancy following my ventral suspensions than after my Alexander operations. I think I have seen one-half a dozen cases in which suspension was done and, later, the abdomen opened for various diseases. I protest against Dr. Fowler's method of urachus fixation. I have seen two cases in which the abdomens were re-opened after urachus fixation; in each case the uterus *was* fixed and there would have been trouble in labor.

What becomes of the ligament? I present the pictures of ligaments hanging the uterus up after suspension where I had had to open the abdominal cavity for other causes, months or years later, and offer the history of a case in which I was obliged to do a Cæsarean section for twins following suspension of the uterus by another operator.

DR. C. R. HYDE: I should like to make one criticism regarding Dr. Chase's limitation of the Alexander operation as only being applicable to the non-adherent cases. In many instances, where the uterus is retroverted and adherent, the Alexander operation is done by some operators; a posterior section is first made, the adhesion broken up and then the Alexander operation performed, with successful results. I believe the Alexander operation *is* applicable in such cases. Selected cases of course are non-adherent retroversions. Whether we elect to do a fixation, a suspension, or Alexander operation I believe the ideal method is to open the abdominal cavity to obtain a full view of the conditions present and if adhesions exist break them up under ocular inspection. I do not believe that there are any present who can always tell, prior to opening the abdomen, whether adhesions exist posteriorly or not, for some uteri, which appear movable on bimanual examination, when the abdomen is opened show the presence of slight adhesions. These are not extensive enough to interfere with

the mobility of the uterus and are, therefore, I believe, almost impossible of diagnosis prior to section.

DR. L. G. BALDWIN: I never would open an abdomen, either to do a suspension or a fixation, in cases of moderately prolapsed uteri. I know that, in my experience, I have never felt justified in opening the abdomen for a moderate degree of prolapse, or moderate retroversion. I think in the application of either of these methods the individual case should be considered.

In the matter of shortening the round ligaments I have had no experience; it is an operation that I have never done. The operation that I have performed is a limited suspension or limited fixation. By that I mean I do what I hope will result in a temporary fixation, one that will give way at the end of three or six months. I never hope for a permanent fixation to be established. I do not use chromicized catgut but rather a stiff, stout, plain, sterile catgut which will give way sooner. Two or three such ligatures are passed in the upper, posterior wall of the fundus, and this is supplemented by the introduction of a pessary. If I should sew the uterus so tight that it would stand firm I should be doing what I believe would be against my better judgment; I would be fixing it more firmly than would be proper. I am glad to hear that other men have been able to relieve the symptoms by fixing the uterus. I have not. Some men may operate, and fix the uterus, without any relief of symptoms although the uterus may now be in place; the patient may have just as much backache as she ever had and thus be but little, or not at all, benefited. The wearing of a pessary after the operation is in no way uncomfortable and, I believe, supplements the slight tilting forward of the uterus that follows three, six, or ten months afterwards, and it proves very satisfactory. It is five years since one operation was done and the patient has been perfectly well since and has given birth to children. Another woman operated upon has since given birth to two children and is perfectly well.

There are a number of cases of retroverted uteri where the patients can be made comfortable without opening the abdomen; where there is no disease of the tubes or ovaries but there is a localized peritonitis that holds the uterus more or less fixed, with a bad circulation in the uterus and broad ligaments. Local treatment being carried on for a few months or a year, the circulation apparently becomes readjusted, the exudate clears up and the patient is made very comfortable with some kind of support.

DR. J. C. MACEVITT: My experience in these operations has not been large. I know but little of Alexander's operation except what I



have learned from reading and hearing. I have assisted four times in doing this operation and in each instance the operation was not successful. As regards suspension and ventral fixation a marked difference exists between the two. I have been fortunate enough to witness operations for suspension at the Johns Hopkins hospital and I was surprised at the facility with which they were performed. A very slight incision was made, two to two-and-a-half inches in length, the parts were retracted, the mouse-toothed forceps introduced and the uterus brought into view. As a rule two sutures only were used, No. 2 silk. On each side the peritonæum is grasped between the teeth of the forceps and incised. The silk is passed through the peritonæum of the abdominal wall and the muscular tissue of the fundus, slightly posterior; a second suture is passed further back which slightly anti-verts the fundus of the uterus. The sutures are then tied, the abdominal wound brought together, and in nearly all cases there were no adhesions. Whether these cases had been under treatment and the adhesions broken up I do not know. The uterus is easily reached and suspended. It struck me that the tissues that were taken up were so friable that, in case of pregnancy, they would easily give way. I can hardly appreciate how the fundus of the uterus can be held down when such strong forces are brought upon it from the pelvic and abdominal cavities. One is justified in doing a suspension. In cases of adhesion I believe it is preferable to open up through the cul-de-sac in order to break them up rather than to open the abdominal cavity from in front. As a rule, they can be broken up through the cul-de-sac and the uterus made freely movable.

I have had some experience in ventral fixation. I had three cases, two recently, in which there was a marked prolapse. In one case I did a ventral fixation. That was some four months ago and the patient has had complete absence of previous symptoms and suffering. She has been going about doing laborious work. Another case that I operated upon three years ago I saw recently and she has had complete relief following ventral fixation. On the whole I believe that the operation of suspension is the preferable one.

I have not had success with the introduction of pessaries. Dr. Baldwin stated that after having performed a modified suspension he introduces the pessary but he did not state how long he allowed it to remain. I cannot see the object of the pessary in that early stage of the operation. If the strong sutures are used the retaining pessary is useless or will at least produce some inconvenience without doing any good.

DR. WALTER B. CHASE: I should like to ask Dr. MacEvitt to state the difference between the technique of ventro-fixation and ventro-suspension.

DR. MACEVITT: In suspension one simply takes up the peritonæum and introduces the sutures through it. But ventral fixation means a permanent fixation of the uterus to the abdominal wall and here one must take in the muscular tissues of the abdominal wall and of the uterus; the sutures are then tied and the abdomen is then closed as in any abdominal section. In other words, ventral fixation does not include alone the peritonæum but also the muscular walls of the abdomen. Ventral suspension unites the muscular tissues of the uterus to the peritonæum alone.

DR. WALTER B. CHASE: I am aware of the fact that the paper only partly discussed the question under consideration. It was my intention to exclude all discussion of methods which related to any other operations except the one under discussion and yet they have crept in. Reference has been made by Dr. Dickinson to taking a tack in the round ligament to maintain the uterus in an anterior position. I fail to see why stitching the round ligament, or fastening it in the way Dr. Dudley advises, would not be as likely to maintain the uterus in the anterior position as the Alexander operation. If one will keep the uterus forward why will not the other?

The distinction made by Dr. MacEvitt between ventro-fixation and ventro-suspension is the one commonly accepted. I stated in my paper that every case must be judged by itself. I should deprecate opening the abdomen for all cases of posterior displacements even when accompanied by adhesions.

I know of more than one patient who has conceived and gone three-and-a-half months with the uterus held in position by adhesions and then aborted. There are other intra-abdominal conditions which hold the uterus in position such as neoplasms and other growths. This was not taken into account in the paper.

On theoretical grounds there must be something in Dr. Dickinson's practical talk. Where the folds are sufficiently strong it is a perfectly rational method and one which in a certain proportion of cases one may adopt in the endeavor to fasten the uterus forward in that manner; once in that position it is likely to remain there. That is the reason of Dr. Baldwin's success in the cases where there are the slightest adhesions.

Official.

FREDERIC J. SHOOP, *Recording Secretary.*

## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*

DR. T. W. CLEVELAND, DR. G. H. MALLETT, DR. A. D. CHAFFEE.

## PÆDIATRICS.

## UNITED STATES.

*Case of Fatal Fætal Ichthyosis.*

ANNIE STURGIS DANIEL and LOUISE CORDES (*Journal of the American Medical Association*, October 27, 1900) reports the case of a child which was born between the eighth and ninth months of pregnancy of healthy Italian parents. Neither was syphilitic or alcoholic, and there was no history of maternal impression or shock obtainable. The mother worked at finishing trousers as usual, from 6 A.M. to 11 P.M. throughout her entire pregnancy. Nothing unusual was noticed by her about the pregnancy except that she was larger than in former pregnancies and suffered much from pain in her back for a month before the birth of the child. Labor was normal, conducted by a midwife. When the child was seen by the writers it was five hours old, had passed both urine and meconium, was crying continuously in a penetrating, distressing way. Respiration was irregular, the surface of the body was cold and could not be warmed even with hot-water bags. The child could not nurse and swallowed with difficulty milk from a dropper. It died suddenly twenty-seven hours after birth. The child hardly bore a resemblance to anything human. The only part of the body capable of motion was the tongue. The body looked as if incased in a skin too small for it, so that the skin in many places had been torn completely through, a purple fissure appearing. In other places it was partly torn through, the fissure looking yellow. The skin was thick and inelastic, like sole-leather. The external ears were replaced by a collection of comical projections, the palpebral fissures were filled with purple masses, deep down in the sockets eyeballs could be distinguished. The eyelids and lips were purple and widely everted. Fissures and conical projections covered the face and scalp. Examination after death revealed meningeal hæmorrhage, atelectasis and small areas of emphysema in the lungs and congestion of all the organs. Cultures made from the various organs showed a bacillus of the colon group. There was acute exudative nephritis. Examination of the skin showed that all the layers of the epidermis, save the stratum granulosum were thickened, notably the stratum lucidum and the stratum corneum. The corium was œdematous and contained little

elastic tissue; its papillæ were hypertrophied and the blood-vessels distended with blood. The sweat glands were normal but increased in number; the sebaceous glands normal in number but the ducts showed degenerative changes. The panniculus adiposus was almost absent in places and everywhere poorly developed. Nothing is practically known of the cause of this disease. It is not a fatal disease *in utero* as out of the forty-five reported cases only one was still-born.

### *Torticollis.*

WALTER C. WOOD (*Brooklyn Med. Jour.*, November, 1900) says that any arbitrary classification of this disease must necessarily be faulty on account of the uncertainty concerning the various etiological factors. The patients, however, clinically group themselves into certain classes.

1. *Torticollis of Infancy*.—Here the location is the sternomastoid muscle which is shortened but has no secondary contractions. Infants often present a swelling of the body of this muscle which has been known as a hæmatoma of the muscle and was regarded as the cause of the shortening, but such is not the case as a rule. Gould states that only 20 per cent. of cases of hæmatoma are followed by shortening. Sections of these swellings show that they are traumatic in origin. In the earlier stages there is an effusion of blood and later an increase of fibrous tissue with fragments of muscle undergoing degeneration; the sheath is untornd. While the muscular rupture may be intra-uterine, in the large majority of cases it is plainly a lesion due to violent parturition. It is unnecessary to open the hæmatoma. Some disappear spontaneously without resulting contraction. Potassium iodide in lanolin used with gentle massage is useful. When shortening is present massage and holding the child so as to cause tension on the contracted side are usually sufficient, but a retention collar at night may be used in stubborn cases. Cases with a plain head lesion due to forceps are reported showing a cortical origin to the irritation.

2. *Contractured Cases in Children of Several Years' Duration*.—Here the sternomastoid is primarily shortened, but the deep muscles, the scaleni and the posterior group as well have not developed to their full length. The cervical spine is curved and compensatory curves have developed in the dorsal and lumbar region. Even a facial asymmetry follows in long-continued cases. These cases are amenable to a combination of surgical, mechanical and calisthenic measures. Surgical interference may ordinarily be confined to the



sternomastoid, the platysma and underlying fascia. The posterior muscles need not be cut. Where only the sternal attachment needs to be severed the subcutaneous method is good, but if the clavicular portion needs to be divided free open section is safer and better. While the patient is still under the anæsthetic the deeper structures should be thoroughly but gradually stretched. The head should then be retained in a slightly over-corrected position by a plaster-of-Paris cast for about a month. After this corrective gymnastics are preferable to mechanical retention. This method applies only to non-spastic cases.

3. *Muscular Torticollis*.—The onset is acute, the pain severe and there is some constitutional disturbance, with a history of exposure in most cases. The salicylates, Turkish baths, local heat, careful massage, mustard or hot poultices followed by the application of a thick layer of cotton or wool will cure this type in a few days.

4. *Glandular Torticollis*.—Here the head is held in a position to best relieve muscular tension on the inflamed glands, and the muscles on the affected side are relaxed, while the indurated swellings can be felt. There is usually fever and previous source of infection in the throat, nose, ear, or general system. Early drainage is usually advisable to limit the process and lessen the consequent disfigurement.

5. *Osseous Torticollis*.—The type is a spasmodic contraction, especially of the posterior groups of muscles and is due to reflex irritation from caries of the cervical vertebræ. This must be carefully distinguished from the posterior variety of spasmodic torticollis of nervous origin. Instant death resulted in one case of mistaken diagnosis where the muscles were cut and forcible straightening attempted. The great rigidity of both sets of posterior muscles, the severe pain, especially at night, the dysphagia, the attitude of the patient and the care with which he avoids all jarring of the head, the tension of the muscles at any attempt at passive motion and the resistance to motion serve to make the diagnosis clear. A change from the normal curve of the spinous process line is evident on close observation. Thickening of the posterior wall of the pharynx, the formation of a retropharyngeal abscess or an unevenness in the surface of the bodies of the vertebræ felt through the posterior pharyngeal wall confirm the diagnosis beyond a doubt. These cases must be treated for months on a frame cot, recumbent and with head extension applied by a weight. Not until the pain has entirely ceased can any appliance that permits an upright position be used.

6. *Cases due to Ocular Defects*.—The eye lesion is an astigmatism

or a muscular deficiency and after correction by prisms or tenotomy of the eye muscles, the torticollis gradually but completely disappears. In any case of torticollis the eyes should be tested.

7. *Cases due to Occupation.*—This usually occurs in neurasthenic or hysterical patients and seems similar to other professional neuroses, such as writer's cramp. The onset is sudden and may follow grief, fright or overwork. Rest in bed with sedatives and tonic treatment gives the best results.

8. *Severe Spastic Cases.*—These cases are gradual in onset, are progressive in the number of muscles involved, and in the severity of the spasms. It seems to be a disorder of the cortical centers for rotation of the head but the precise nature of the trouble cannot be stated. Medical treatment avails little. Gibney declares mechanical restraint to be a failure, while resection of the spinal accessory nerve is usually disappointing. The only reasonable prospect of relief lies in dividing the posterior branches of the upper cervical nerve roots, in addition to the older procedure, as devised by Keen of Philadelphia, and Gardner of Melbourne.

Keen's operation is as follows: An incision three inches long is made from one-half inch below the lobe of the ear to the middle line of the neck posteriorly. The trapezius is divided transversely and below it is located the occipitalis major nerve as it escapes from the complexus half an inch below the line of incision. The complexus is divided transversely at a level with the nerve, and the nerve followed down to its origin from the posterior trunk of the second cervical, and it is then excised. The suboccipital where it passes over the arch of the atlas is located and excised. One inch below the second is the third internal branch, which is also to be divided. It is advisable to operate on the sternomastoid muscle and its spinal accessory nerve at a preceding operation. Kocher thinks that a section of the muscle alone, if sufficiently radical, is able to cure these cases. He resects a portion of the upper end of the sternomastoid and also of the entire posterior group. Walton believes that the most intractable cases must be treated by both nerve and muscle section on both sides, done in several stages.

The prognosis of these major operations involve three points:

1. Risk to life. Only one death has been reported, and that was due to erysipelas. Shock is not marked. It is better to divide the operation rather than prolong it.

2. Ill effects. Paralysis has never followed and the scars are a small penalty to pay for relief from spasmodic torticollis.

3. Cure. As the operations have become more radical the percentage of cures has increased. It remains for neurologists to establish a more exact pathology and to indicate where and when, if ever, a cortical operation is advisable.

*Ophthalmia Neonatorum Prophylaxis.*

FRANK TODD (*St. Paul Med. Jour.*, November, 1900) says that with the exception of atrophy of the optic nerve ophthalmia is the most frequent cause of blindness. In Great Britain from thirty to forty-one per cent. of the inmates of four asylums owe their blindness to this disease, and Burnett estimated that of the 50,568 blind persons in the United States, as shown by the census of 1890, thirty per cent. became blind from this cause. Other countries show a similar percentage. This disease is always due to an infection which is, except in rare instances, derived from the vaginal secretions of the mother. While the gonococcus is the germ most frequently found, in some cases where this was absent the pneumococcus has been found in sufficient numbers to warrant its being considered the causal factor. The severer forms are always due to the gonococcus which is capable of producing rapid destruction of the tissues of the eyeball. With the advent of antiseptics it was found possible to absolutely prevent this disease by proper precautions. Various solutions have been tried but the 2 per cent. nitrate of silver solution has been proved efficacious and not irritating enough to inflict serious trouble in its reaction. To prevent this reaction some physicians drop in a solution of sodium chloride just after using the silver nitrate. In all suspicious cases as soon as the child is delivered the face should be cleansed with absorbent cotton soaked in a solution of boric acid, bichloride of mercury 1-5000, or even sterile water. When the lids and lashes are clean, the lids are separated and one drop of the 2 per cent. solution is dropped in each eye. There is, however, another agent which seems to prevent ophthalmia neonatorum without producing reaction, and that is protargol in 5 per cent. solution. This is not caustic and yet seems to be an efficient germicide and is, therefore, advisable in private cases where the conjunctivitis caused by silver is a source of worry to the parents. Cates says that in all cases where labor would not be materially delayed thereby he allows the head to be delivered without rupturing the membranes. This plan should be followed out if possible in all cases where gonorrhœal vaginitis is known to exist. When the disease appears in one eye the other should be immediately protected by a shield or some clean covering to prevent its becoming infected.

*Recurrent Vomiting in Children (Cyclic Vomiting).*

J. P. CROZIER GRIFFITH (*The Amer. Jour. of the Med. Sciences*, November, 1900) gives the history of four cases of this disease, the first comparatively mild in type, the second very severe, while in the third and fourth instances the children died. Very little that is definite appears in medical literature concerning this curious disease. Leyden describes certain gastric crises under the title of "periodic vomiting," regarding the condition as a pure neurosis, the symptoms of which are practically identical with those of the gastric crises of tabes. Abdominal pain is referred to as a prominent and constant symptom. Boas draws a sharp distinction between gastric crises and periodical vomiting on this very point, claiming that pain is absent or but slight in the latter. He insists upon regularity in the periodicity of the attacks of vomiting. Langford Symes refers to periodic gastric attacks, but describes them as depending on dietetic causes and relieved by vomiting. Rotch, Holt, Pepper, and a few others have described cases similar to those given to the writer.

*Symptomatology.*—The attacks develop with more or less suddenness at comparatively irregular intervals, the children having, as a rule, good health between the attacks. Vomiting may usher in the attack or there may be prodromal symptoms, lasting from an hour to a day, such as loss of appetite, slightly coated tongue, malaise, possibly headache, generally constipation, sometimes diarrhœa. There is never a history of decided indigestion preceding or in any way connected with the attack. Obstinate and oft-repeated vomiting is the chief symptom of the attack itself; the contents of the stomach are ejected but rarely show evidence of abnormal fermentation. Later the vomited matter is a watery fluid with mucus or bile, occasionally a little blood. There is sometimes much violent unproductive retching. The vomiting usually continues frequent until the close of the attack, when it may cease suddenly or gradually. Constipation is usually present, sometimes exceedingly obstinate, while in other cases it is readily relieved. In no case, however, did the relief of constipation have any influence in bringing the attack to a close; rather, the bowels seemed to act because the attack was over. The abdomen is flat, sometimes retracted, but no more than would be natural in any asthenic state with empty intestines. Abdominal pain is slight or absent. Thirst is intense, but the appetite is lost. The tongue is variable, but the coating is not great. The breath has sometimes a very peculiar odor (acetone?). Some degree of tonsillitis has been noted in two cases. There is apt to



be more or less fever during the attack, although this is not a constant symptom. Respiration is decidedly affected, becoming sighing, irregular and often very rapid. The pulse is usually rapid, often irregular. The amount of urine seems to be somewhat increased as a prodromal symptom, but it becomes scanty during the attack and in two fatal cases seen by the writer it contained albumin and casts. Indican has been found just before, and acetone during the attack. Holt reports the ratio of uric acid to urea before the attacks, in one case, to have been 1:54; during the attack 1:157 and 1:132; during convalescence 1:50. In one case of the writer's the ratio was 1:176 on the second day of the attack. Extreme restlessness with constant tossing and but little sleep occurs in severe attacks, and more or less restlessness is always noted. Exhaustion becomes extreme, emaciation is marked and the child becomes apathetic although conscious. Pruritus has been noted.

The duration is variable. In Holt's detailed case the attack always lasted five days with improvement beginning on the third day. Rotch considered two or three days as the average duration, although in some of his cases the attacks lasted from seven days to two weeks. In the writer's cases the longest attack was ten days, and a final fatal attack in one case lasted only two days. Convalescence is astonishingly rapid. The frequency of occurrence of the attacks varies from three weeks to six months in the various cases, and in only one case reported has there been a regular periodicity.

*Nature and Cause.*—This may not be the same in all cases. It is evidently not dependent upon errors in diet or digestive disturbances, nor is it evidently a pure gastric neurosis. Rachford believes that the attacks are due to lithæmia or some allied condition, and that there is absorption and storing up of leucomains. He considers it a lithæmic gastric neurosis allied to migraine, and supports this view by the fact that in one of his patients the attacks changed to migraine as the child grew older. The condition of the urine would confirm this opinion. The presence of terminal nephritis in the two fatal cases reported suggests that the disease is due to the presence in the blood of some toxic substance—probably not uric acid, but some toxalbumin closely allied to it. Pruritus and diffuse articular pains in one case point to a disordered hæmic state. The presence of acetone indicates grave disturbances of metabolism.

The disease may begin at any time in childhood but in the majority of cases the first attack has occurred between the first and third years. A neurotic family history has been observed in several cases. The

most careful supervision of the life of the children under the writer's care failed to reveal any immediate exciting cause.

The diagnosis is not difficult after a first attack. Meningitis, especially the tubercular form, may cause confusion at first, but the onset is more gradual, vomiting is not as frequent, and the vasomotor and possible ocular symptoms are quite distinctive. Some form of intestinal obstruction is most likely to be confused with this disease, but the absence of severe abdominal pain, of bloody mucous stools, and of any discoverable tumor and the persistence of vomiting after the relief of constipation will distinguish recurrent vomiting.

The prognosis is generally good, and as a rule the disposition of the attacks to recur diminishes as the child grows older. That there may be a fatal issue the writer's cases show, one of which died at the age of five, the other six years, after having recovered from several previous attacks.

The treatment is most unsatisfactory. Owing to ignorance of the exciting causes, preventive treatment can be only experimental. If prodromal symptoms threaten, a free purgative may do good by removing the poisonous matter from the blood; care should also be taken to secure free action of the kidneys. After the attack is in progress saline cathartics or calomel should be given if they can be retained. After that it is better to give the stomach entire rest and administer small concentrated nutrient enemata, and chloral and bromide by rectum. In bad cases morphine hypodermically should be used. Stimulants by rectum and strychnine and digitalis subcutaneously are to be used as needed. Hypodermoclysis offers a hope of relief in severe cases, while ice or counter-irritants over the epigastrium may be tried as well. If there is a lull in the vomiting it is safe to try to obtain purgation by the administration by mouth of phosphate of soda or Rochelle salts. Enemata to move the bowels should not be given, as no relief is obtained, and it is desirable to keep the rectum free from irritation for the reception of nourishment and medicine.

*The Quantity of Diphtheria Antitoxin required in the Treatment of Diphtheria.*

WM. H. PARK (*Archives of Pediatrics*, November, 1900) says that the right dosage of diphtheria antitoxin may be better determined if the nature of its action is clearly understood. It can be compared in its effect on toxin to that of an alkali neutralizing a strong acid. In diphtheria it is desirable to give enough antitoxin to neutralize all the toxin

present and about to be produced at the seat of inflammation and also whatever may have been absorbed. The tissue changes already produced cannot be removed nor can the antitoxin neutralize the poisons of the other bacteria so often associated with the diphtheria bacilli. As the knowledge of the comparative harmlessness of antitoxin has increased the doses given have been somewhat larger. The following amounts are given by many good men: Light or moderate cases seen very early 1000 to 1500 units; severe cases in young children with swollen lymph nodes or stenosis, 2000 units; older children, 3000 units. These doses may be repeated in from twelve to twenty-four hours if necessary. McCollom has used, with good results, at the Boston City Hospital, 4000 to 8000 units in mild cases, and in the most severe 40,000 to 60,000 units. He claims better results than with small doses, but admits that the rashes and joint affections have been a little more numerous but never dangerous.

In August and September of this year one-half the cases of diphtheria at the Willard Parker Hospital received 1000 units and the other half 2000 units given in one dose on admission; the cases were taken alternately without regard to severity or age. Of 93 cases the mortality was 3 per cent. higher in those receiving the smaller doses, but during the two preceding months the mortality was 4 per cent. higher for those receiving the larger doses. The severity of the rashes was about the same. The local condition did not clear up as rapidly with 1000 as with 2000 units, and in two or three cases death might possibly have been avoided by large doses. From observations on these cases and those reported by McCollom it is fair to conclude that the serum complications are much less from large doses than most believe. The condition of the throat as to swelling, extent and nature of the membrane, etc., is a better guide to dosage than the general condition of the patient, while the curative power of the antitoxin is influenced more by the duration of the disease than by the dosage. Where the inflammation has advanced or has not begun to subside in twelve hours a second dose should be given; in a few cases a third dose is required in twenty-four hours. It is better to give too much rather than too little, but moderate doses seem to accomplish as much as the very large ones. From these hospital experiments and the observation of numerous other cases it has seemed that the following dosage was usually sufficient: Very mild cases, 1000 to 1500 units for the first dose; moderately severe cases, 2000 to 3000 units for the first dose; very severe cases, 4000 to 5000 units for the first dose. Laryngeal cases,

according to severity, 2000 to 5000 units. For children under one year of age the dose should be one-third less.

*Measles and the Exanthemata.*

C. F. WAHRER (*Jour. of the Amer. Med. As.*, November 10, 1900) thinks it is not always best to endeavor to keep children from acquiring measles. Measles, ever so mild, is prophylactic against any future exposure, and while it is regarded seriously by many on account of the possible complications or sequelæ, it will be found, on investigation, that the serious or fatal cases are almost entirely confined to adults or infants. If the susceptibility to acquire measles diminished with age, as is the case with scarlet fever and whooping-cough, it would be more worth while to quarantine, but such is not the case; adults are quite as liable to acquire measles and the mortality is usually great. In cases of a mild epidemic it would be wise to expose children in ordinary health, between the ages of 2 and 14, to it.

*A Clinical and Pathological Study of the Rash of Scarlet Fever.*

JAY F. SCHAMBERG (*Ibid.*) says that the eruption of scarlet fever is a dermatitis presenting a remarkable constancy in its general characteristics, yet the color of the rash varies in different individuals and at different times in the same individual. Accurately speaking, it is never scarlet and only occasionally bright red. More commonly it is a dull red with an appreciable element of brown. On close inspection the rash is found to consist of small deep-red puncta surrounded by erythematous areolæ of somewhat brighter hue. These deep-red puncta represent, for the greater part, inflammatory cellular infiltration about the hair-follicles. There is dilatation of the blood-vessels, an exudation of lymphoid cells and polymorphonuclear leucocytes into the papillary layer, with some invasion of the epidermis by the migratory cells. Many cases exhibit small pin-point to pin-head sized elevations occurring mainly at the site of hair-follicles; this condition has been termed "scarlatina papulosa." In addition a general "gooseflesh" condition of the skin is sometimes noticed, best marked upon the abdomen and chest. These papules may be of the normal skin tint or reddish, appear a few days after the onset of the disease, and persist from three to six days, sometimes being so marked as to give the skin a "grater-like" feel and appearance. Vesicles are far more common in scarlet fever than is ordinarily believed. They are conical,



epidermal elevations of small size, with turbid contents, usually disseminated and commonly situated on the abdomen and chest. The mons veneris is the region where they are most profuse, for here the erythema is apt to be most intense. Here they often develop into well-marked yellowish pustules. Rarely these vesicles coalesce, forming blebs the size of a pea or larger, constituting the "scarlatina pemphigoides" of the older writers. The amount of desquamation is, as a rule, proportionate to the degree of vesiculation. In many cases these vesicles are so small that they are apt to be overlooked in a cursory examination, and some are so minute that they are visible only under the microscope. The turbidity of the contents of these vesicles is due to their invasion by leucocytes. In the attempt on the part of Nature to eliminate the morbid material the leucocytic mass travels toward the surface, lifting up the horny layer. Desiccation of the liquid contents of the vesicles now takes place, and this is immediately followed by the throwing off of the effete products. At this stage, clinically, a small powdery scale is seen at the summit of the dried vesicle. In a day or two this is cast off, producing a small jagged ring of desquamation. The horny layer of the epidermis is lifted off by centrifugal extension of these rings, which grow constantly larger. On the hands and feet the desquamation is different because of the different anatomical structure of the skin. The horny layer of epidermis is thicker, and as the serous exudate from the blood-vessels travels in the direction of least resistance, it burrows its way beneath the horny layer instead of lifting it up in elevated points as vesicles. In this way, in severe eruptions, the horny cuticle is sometimes raised *en masse*, shedding an epidermal cast of the hands or feet. In less severe cases the epidermis peels off in lamellæ or flakes.

Too much stress in the diagnosis of scarlet fever has been placed on the mere occurrence of desquamation. It is possible to have a rash so extremely mild and fugacious as to be followed by a barely detectable desquamation.

There is every reason to believe that the infectious principle is contained in the leucocytes or epithelial débris cast off from the skin. The persistence of desquamation and of the infectivity of the scales is to be accounted for by the depth of the pathological process in the skin.

#### *Diabetes Mellitus in Children: A Report of Two Cases.*

LEOPOLD F. W. HASS *A Jour. Amer. Med. As.*, November 17, 1900) thinks that diabetes occurs more frequently in children than is gen-

erally supposed, for it is unfortunately the fact that urinalysis is not the routine practice with the general practitioner in the diagnosis of disease in children. The general opinion is that the prognosis in these cases is always bad, the disease often assuming an acute form, terminating fatally in a few weeks or months, but cases have been known to live for five or six years. Heredity is an important factor in its ætiology, and a family history of insanity, phthisis, or gout is often obtainable. It also occurs as a sequel to some infectious diseases. The patients generally belong to the wealthier classes and it is especially common among the Jews. The immediate causes are variously stated to be: Injuries of the nervous system, especially of the floor of the fourth ventricle; lesions of the pancreas, of the liver, and of the kidney.

The two cases reported were in the same family, one a girl of nine, the other a boy of five. The family history was as follows: The father had had an attack of articular rheumatism ten years before, but recovered without sequelæ. The paternal grandfather and the maternal grandmother died of tuberculosis and the mother probably has tuberculosis, but refuses to be examined. There was no history of nervous disease or diabetes on either side. There are four children in the family, all of whom have adenoids and enlarged tonsils. The girl had a sharp attack of peliosis rheumatica and examination of the urine showed a specific gravity of 1040 and 5.1 per cent. sugar. Five days later the rash had disappeared and there were no constitutional disturbances. No carbohydrates were allowed. Codein and bicarbonate of soda were substituted for the salicylate which had been given and the child was allowed to go out of doors. Two months later the quantity of urine was reduced to 32 ounces daily and still contained 4 per cent. of sugar. The child's general condition improved. Her appetite was good, bowels regular and tongue clean; the lungs were normal but the heart's action irregular. The urine still contained, four months after the attack of rheumatism, about 5 per cent. of sugar. No medication was prescribed, but a strict anti-diabetic diet was continued.

The second child had been run over and injured internally by a bicycle eighteen months before he was seen by the writer. The physician who attended him at the time being dead, the exact nature of the injury could not be ascertained. One year after the injury he suffered from malaise and pains in the back, and examination of the urine showed 5 per cent. of sugar. Since then he has been on a moderately strict diet, but the sugar persists, varying from 4 to 6 per cent. His health is fairly good.

*A New Spinal Jacket.*

EDWARD A. TRACY (*Boston Med. and Surg. Jour.*, November 22, 1900) has used this jacket in his orthopædic practice for five years with excellent results, and presents its technique for the first time to the profession. The advantages claimed are lightness, cleanliness, rigidity, and durability. It is lighter than plaster of Paris or leather, is freely ventilated, and can be thoroughly washed; it is rigid yet has resiliency, and has been worn for two years without its efficiency being impaired. The material used is wood-plastic splint material. Where the body curves are not too various or compound the jacket may be molded directly upon the body of the patient, but this is rarely advisable. A better way is to make a plaster cast of the patient's trunk. A plaster jacket is first made in the usual way by applying plaster bandages over a tightly fitting undershirt. This is allowed to harden for twenty minutes, is then cut open down the middle of the front and removed. Then, placing it on the floor, the edges are approximated, a string tied around to keep it in place, the inside well greased with lard, an upright piece of timber placed in the center, around which plaster of Paris and water mixed to a thick cream is poured. The piece of timber used should be moist, otherwise it will swell and split the cast.

After the removal of the plaster jacket from the cast the wood jacket is molded upon it in four pieces, back, two sides, and front. The back piece overlaps the sides and two incisions are made in each side of the back directed toward the middle to facilitate molding. The side pieces extend from an inch and a half in front of the anterior superior spine of the ilium to near the middle of the back, overlapping the back piece. Two incisions are also made in each side back. These three pieces are moistened and bandaged in correct positions over the cast and allowed to dry thereon, after which they are removed, glued, and reapplied to the cast until dry. Cotton cloth is then glued on both the outside and inside, and holes three-eighths of an inch in diameter and two inches apart are punched in the jacket, which is then coated with either a solution of gutta percha in carbon bisulphide, or a solution of celluloid in acetone. The latter is preferable. The front portion, after incising the upper half in the median line, is molded upon the cast overlapping the sides about an inch. The upper part can be overlapped as desired to press on the upper chest. The front is then treated in the same way as the back and attached by a leather hinge to one side of the back brace: strips of leather with eyelets for

lacing are fastened to the other side of the jacket front and back, completing the work.

*Diphtheria Bacilli in Healthy Throats and Noses, with Report of Cases.*

FRANCIS P. DENNY (*Ibid.*) says that the occurrence of virulent Klebs-Löffler bacilli in the throats of healthy individuals who have never shown any symptoms of diphtheria has given rise to much misunderstanding, to doubts of the diagnosis of diphtheria based on bacteriological examinations, and has even been used as an argument against this bacillus being the specific organism of the disease. These cases can be readily explained and are in no way inconsistent with the accepted theories of the disease. The frequency of diphtheria bacilli in healthy throats has been somewhat overestimated by the general public owing to the reports in medical literature. Many of these reports show the results of cultures made from individuals living in institutions or in crowded tenements, the hygienic conditions appearing to stand in close relation to the frequency of these cases. Another reason for the high percentage reported is that many times no distinction is made between those persons with virulent and those with non-virulent bacilli.

Diphtheria bacilli are most frequently found in the throats of persons who have been exposed to the disease, and under these circumstances the bacilli are usually virulent; this, however, should always be tested by cultures. Virulent bacilli may multiply in the throats and noses of certain individuals without producing symptoms because these persons have a natural immunity from the disease; it seems probable that this immunity is due in part to the antitoxic properties of their blood, for Wasserman and others have found antitoxin in the blood of individuals who have never had diphtheria. Wasserman obtained blood from several of these persons and found that one or two c.c. of such blood serum was capable of protecting a guinea-pig against several times the fatal dose of diphtheria toxin.

The number of bacilli which may be present in such cases varies greatly. As a rule, they are fewer than during the acute stage of diphtheria, corresponding more nearly to the number of bacilli found in cultures taken in mild or convalescent cases.

Healthy individuals with virulent bacilli in their throats or noses can spread the infection and are just as dangerous as mild or convalescent cases of diphtheria, and ought, therefore, to be detected and isolated. Many outbreaks of diphtheria in children's institutions which



have persisted in spite of the careful isolation of sick children and the disinfection of the rooms, have been quickly stamped out when the healthy children's throats were tested and those with the bacilli were isolated. In every family or institution where there has been delay or lack of thoroughness cultures should be made from the throats of all members, and these should be made from the nose as well as from the throat in every instance. The giving of immunizing doses of antitoxin to all the well members of a household or institution really adds to the necessity for taking cultures from all, for the antitoxin prevents the development of symptoms, but does not prevent the bacilli multiplying in the throat thus rendering the person capable of conveying infection. These cultures are especially needful in persons liable, by reason of occupation or habit, to spread the disease, such as children, milkmen, servants, and nurses. Another reason for making cultures from healthy persons is to determine the source of infection in cases of obscure origin. The reports given by the writer embody the results of cultures taken from 190 healthy boys in a municipal school for truants. The ages of the children varied from ten to fourteen years; 16 of the 190 cultures showed virulent bacilli. The cases are of special interest in another particular. There had been 10 cases of diphtheria in the institution, divided quite evenly among the three large buildings composing the home, but of the 16 healthy boys with the bacilli, 15 were in one building where the boys slept in large open dormitories, 35 boys sleeping in each of two large rooms and 18 in another. In the other two buildings the boys occupied single rooms. The large sleeping rooms were well plumbed and ventilated, and there was ample air space, yet the living and sleeping together of a large number of boys, breathing the same air, seemed to conduce to the development of the germs in many who were naturally immune.

*A Simple Method for writing Prescriptions for Children.*

MAX HUHNER (*Med Record*, November 24, 1900) says that Cowling's rule for calculating the dose for a child is: age at next birthday, divided by twenty-four. This fraction of the adult dose will be correct for the child. A simple method in writing the prescription, to avoid calculation, is to make it contain exactly twenty-four doses, then the entire amount of any drug in the prescription will be the adult dose multiplied by the child's age at the next birthday. Take, for example, an ordinary cough mixture composed of syrup of ipecac.

muriate of ammonia, and fluid extract of squills, the prescription is written for a child of one year as follows:

℞ Syr. ipecac.....℥x  
 Ammon. mur.....gr. v  
 Ex. scillæ fl.....℥ii  
 Aq.....q. s. ad. ℥iij  
 M. S. 5i every three hours.

For an older child simply multiply the quantity of each drug by the age of the child.

*Opisthotonus due to Dorsal Sclerema Neonatorum.*

WILLIAM BROWNING (*Jour. of Cutaneous and Genito-Urinary Dis.*, December, 1900) says that the association of opisthotonus with meningeal trouble is so common that it is of interest to note a case caused by a special skin affection, acting in a mechanical manner. The patient was 17 days old, born after a quick instrumental delivery, of healthy parentage. There was slight facial paralysis which disappeared on the second day, and immediately after birth there had been subcutaneous hæmorrhage about the eyes. The child was breast-fed, never vomited, and the bowels had been regular. Skin sensation was apparently normal. On the eighth day a tendency to opisthotonus was noticed, which gradually became more marked until it was excessive. It could, however, be bent forward without pain. There was no definite spasm of the nuchal or spinal muscles. The opisthotonus was increased by palpation or friction of the back. The skin across the back was enormously thickened and folded in great rugæ, dark purple in color. There was no pitting on pressure, but the skin was board-like in hardness. This condition extended from the lumbar to the cervical region. The temperature was 95° and the child was in partial collapse. This rare skin disease, from its extension and interference with respiration, always tends to an early fatal termination. This child was removed from the hospital by its parents and lost track of.

GREAT BRITAIN.

*Contribution to Our Knowledge of Proteid Metabolism in Children.*

F. W. TUNNICLIFFE and OTTO ROSENHEIM (*Brit. Med. Jour.*, October 13, 1900) point out that the increase of proteids demanded by

a child after the first two years of life is supplied by the addition to its diet of meat and bread, substances whose proteids must differ from those of milk; in order to get the required amount from ordinary milk, the child would have to drink an inconveniently large amount. As to the adequacy of milk proteid, given in sufficiently amount, to replace the proteids of bread and meat, some few investigations have been made in adults and older children, but few or none in children at the intermediary period between infant and adult diet. With adults it has appeared "that the inadequacy of milk as a sole source of proteids depends upon the diluted state in which the proteids are present." Experiments upon adults have shown that the commercial product known as plasmon, which is a soluble solid milk proteid in concentrated form, is capable of fully replacing meat proteids. It occurred to the writers that this substance might advantageously be substituted in children between three and six years, particularly delicate ones, as offering a concentrated proteid diet which should be less at variance with the child's previous food, *i. e.*, milk, than a meat diet. Plasmon is a fine powder prepared from skimmed milk; various analyses have shown it to contain very uniformly from 11 to 13 per cent. nitrogen, and from 70 to 74 per cent. proteids. It can be mixed with milk or added to bread, biscuits, soups, cocoa, etc., without affecting the taste; an economic advantage, moreover, is its cheapness. From experiments *in vitro* the authors decided that the digestibility of bread was not affected by the addition of plasmon; also, that in a given time much more of the proteid of plasmon bread was digested than that of ordinary bread and even than that of meat: they also found that plasmon could be added in almost any quantity to milk without appreciably increasing its bulk or making it less digestible. The clinical experiments were made upon three children, two healthy boys of two and a half and five years, respectively, and upon a girl of four, a badly-nourished child, just convalescent from pneumonia. The experiments were most carefully conducted to eliminate every possible source of error and the original article contains many tables and charts which we cannot reproduce here. The children were kept for a time under the same conditions as during the experiment; thereafter, there was first a period during which the children were fed upon meat, a second period upon a diet of plasmon and a third upon a meat diet again. From the experiments upon the two boys it was shown that the plasmon, both in its assimilability and flesh-forming power, was equal to meat, such slight differences as occurred being in favor of the plasmon, especially as regards increase in body weight. In the case of the invalid child the milk proteid was distinctly

better assimilated than the meat proteid while during the plasmon period there was an increase of 280 grammes in the body weight and no change during the subsequent meat period. As to phosphorous metabolism, further reports will be given; it is interesting to note, however, that in the case of the invalid child there was a considerable increase in the amount of phosphorus retained in the body during the plasmon period.

*The Treatment of Severe Cases of Diphtheria with Saline Infusions.*

E. E. LASLETT (*The Lancet*, October 20, 1900) employs saline infusions in two classes of patients: (1) in cases in a late stage, when the use of the antitoxic serum is useless, and where there is restlessness, thirst and persistent vomiting with great heart weakness, and (2) in patients in the acute stage with the idea of diluting the toxin in the blood and helping in its excretion by promoting diuresis. From ten to fifteen ounces of warm saline solution of the strength of two teaspoonfuls of salt to the pint is injected under the skin below and about the right breast. The pressure used is slight, and half an hour should be occupied in injecting the above amount. Children bear this well, and commonly fall asleep toward the end of the injection. The allaying of thirst and restlessness and the marked improvement in the pulse has been very gratifying in all cases. Owing to the youth of the patients and the severity of the illness the urine was commonly passed in the bed, but in the cases of one or two older children diuresis was marked and continued for a day or two after the treatment had ceased.

*Operation versus Truss in the Inguinal Hernia of Childhood.*

R. HAMILTON RUSSELL (*Ibid.*) says that the capabilities of the truss in the treatment of hernia in children has been greatly over-estimated. While it is true that after a truss has been carefully used for some months or years its use may be discontinued and the rupture not come down for years, yet that fact by no means proves the case cured. In operating upon 80 cases of hernia in children it was found that in every instance the trouble was caused by the presence of a congenital sac, and of these sacs 79 were of funicular origin. The writer firmly believes that the following conclusions are correct: (1) That oblique inguinal hernia in childhood is always associated with a congenital sac; (2) that children may possess the sac but remain free from hernial descent throughout life or up to any period of life; (3) but that the possession of such a sac predisposes to hernia all through life; (4) all cases of



oblique inguinal hernia result from the presence of this congenital sac, no matter at what period of life the hernia first manifests itself; and (5) subjects who never possessed such a congenital sac, or in whom it has been efficiently removed, cannot acquire oblique inguinal hernia. While acquired hernia is common elsewhere, notably in the femoral canal, and in the form of direct hernia through the external ring as well as in any portion of the abdominal wall that may have been incised, the peculiar mechanism of the inguinal canal renders it immune from liability to become the seat of an acquired hernia. The inguinal canal being formed by a rigid tendinous half and an actively contracting muscular half, the action of the curved fibers being sphincteric, the inguinal canal is really a half-sphincter, and the effort made by the abdominal muscles to force a piece of bowel into the inguinal canal defeats itself, so to speak, by closing the opening of the canal with a firmness in direct proportion to the muscular force expended in an effort to force it.

The objections urged against operation as to the unsuitability of the anatomical structures in young children and the difficulty sometimes experienced in finding the sac are not real objections. While the operation is difficult it is perfectly feasible and practice only is needed to complete success. The familiar advice, "ligature and removal of the sac *as high up as possible*" is the royal road to disaster. The danger lies in the possibility of a diverticulum from the bladder being included in the neck of the sac; if this element is avoided the mortality would be practically nothing. It is difficult to realize that the proper place for the ligature may be when the sac has been well freed and pulled down nearly half an inch below the external ring, but such is commonly the case, and when any suspicious thickening appears at the neck of the sac it must be carefully excluded from the ligature, which must be applied immediately below it. This done and the sac cut away, the stump will spring back along the inguinal canal and be situated well within the curved fibers that form the inguinal sphincter. When this thickened structure does not come into view a portion of sub-peritonæal fat will appear, the lower limb of which will correspond with the internal ring and be the site for the ligature. In view of the above conclusions the importance of radical operation in all cases of oblique inguinal hernia is apparent, the removal of the sac doing away with the possibility of hernia in later life. In the case of very young infants the operation may be postponed for a time.

*Arrested Mental Development following Depressed Fracture of the Skull; Trephining; Improvement.*

ALFRED CLARK (*The Lancet*, November 3, 1900) was consulted in reference to a girl of eleven years of age who had the following history: The child had been intelligent until four years old, when she fell from a chair, striking her head. This was stated to result in "concussion of the brain" and on recovery she began to have severe fits about once a week, the spasms lasting twelve hours or so. She seemed to receive no new impressions, her vocabulary being limited to words used before receiving the injury. She was boisterous, mischievous, and destructive, with a peculiar shambling gait. Physically she was tall and well developed. A depression of the skull about one and a half inches long and three-quarters of an inch wide was found in the left occipital bone near the parieto-occipital suture. On trephining over this depression the meninges were found enormously thickened and adherent. The dura mater was opened by a crucial incision, and a trocar and cannula passed into the brain-substance in several directions, but no fluid was obtained. The exposed dura mater was cut away, the adhesions separated with the finger, the disc of bone was not replaced, and the scalp wound was completely closed by sutures. The recovery was rapid and mental improvement was immediate, the fits ceased, the child was quiet and well behaved, walked well, and is acquiring the names of objects, etc., with the facility of a child of four or five years of age.

*A Case of Scarlatina Pemphigoides.*

ARTHUR SOMERS (*Ibid.*) reports the case of a child of 6, who had a typical but mild case of scarlatina, and was, at the end of six days, apparently convalescent. On the seventh day, however, the temperature rose to  $104^{\circ}$ , accompanied by symptoms of arthritis in the knee, elbow, and wrist-joints, while the trunk, limbs, face and scalp became covered with vesicles which in three or four days merged together and became pustular. Under the use of salicylate of soda the arthritis subsided, but the temperature remained high for ten days, during which time there was a free discharge of pus from the coalesced pustules. Although antiseptic dressings were applied, it was four weeks before supuration ceased. There was no albumin nor any affection of the serous membranes. Had there been any umbilication or pitting smallpox would have been suspected, so large was the crop of vesicles. It is possible that it may have been varicella exaggerated by the scarlatinal

virus, as the period of incubation of varicella sometimes extends to sixteen or even eighteen days, and the child may have been exposed to infection before the onset of scarlatina.

*The Treatment of Diphtheria by Iodine.*

HUGH TAYLOR (*The British Med. Jour.*, November 10, 1900) says that for more than twenty-five years he has used iodine in the treatment of diphtheria, with the result that out of a great number of cases, both young and old, only two have resulted fatally. The method employed is as follows. A full dose of calomel is administered, then the throat, tonsils, back of pharynx, and uvula are painted with a camel's hair brush or a swab of cotton dipped in tincture of iodine. Inhalations of vapor arising from a teaspoonful of tincture of iodine in four ounces of hot water should be kept up for five minutes at a time every half hour, or oftener in severe cases. In bad cases small doses of the tincture may be given internally and the air of the sickroom should be disinfected daily with some grains of iodine volatilized on a hot shovel. In addition to this, quinine, tincture of perchloride of iron, alcoholic stimulants as needed, and plenty of milk, beef-tea, etc., should be given.

*Case of Urinary Calculi lodged in the Vagina.*

H. F. LECHMERE TAYLOR (*Ibid.*) reports the case of a young Hindu girl who was brought into the hospital at Jalalpur in a semi-unconscious and extremely emaciated condition. The parents stated that a stone had been removed four years before. The girl had diarrhoea, incontinence of urine, and a foul discharge from the vagina. A stone could be felt with the sound about half an inch from the meatus. In the vagina a stone the size of a walnut was found; this was removed with lithotomy forceps and behind it were four others widely distending the vagina. The stones were rounded, faceted, largely composed of lime salts, and together weighed 2 ozs. 100 grs. The patient appeared moribund and further investigation was suspended; hypodermics of strychnia and nutrient enemata revived her. A sloughy ulceration set in, which was treated by antiseptic douches and dusting with iodoform and boric acid. On the sixth day, after removing a slough, another stone weighing 1 oz. and 45 grs. was removed under chloroform. The septum between the vagina and urethra was absent except at the meatus, where a ring about one-quarter of an inch broad remained.

Between the neck of of the bladder and the cervix was a fistula admitting the finger. The patient gradually failed and died ten days later.

*A Case of Traumatic Cephalhydrocele subsequently becoming Ossified.*

JOSEPH BEARD (*The Quarterly Med. Jour.*, November, 1900) reports the case of a child who was delivered by forceps in the right occipito-posterior position after a tedious labor. The head was unusually large and there was considerable molding. The following day a tense, elastic, fluctuating tumor, the size of a large walnut, was noticed on the left side of the head above and anterior to the parietal prominence. Crying increased the size and tension of the tumor, but there was no pulsation. Occupying the periphery of the tumor were several fissures running downward and forward, and also upward towards the sagittal suture. The child was normal and healthy in every other way. A month after delivery the tumor was smaller and imparted to the touch the sense of egg-shell crackling, while in two months it had shrunk to half its original size and was firmly ossified. The child is strong and well.

*Abdominal Tumor. (Included Fetus.)*

G. A. WRIGHT and D. S. WYLIE (*British Med. Jour.*, November 17, 1900) report the case of a female child, two months old, fairly nourished, who was admitted to the hospital with the following history: She was born at full term after a tedious labor. The child's abdomen was swollen at birth and had steadily increased in size. There was a bronchial cough and dyspnoea. On the left side of the abdomen was a large, smooth, tumor, not tender, commencing in the left lumbar region and extending beyond the umbilicus. The front and upper portion seemed cystic but behind it was solid. Four days after admission the tumor was tapped and 19 ounces of pale yellow fluid, in which were small shreds of tissue, were removed. The tumor was now much smaller, firm, non-fluctuant, and nodulated. The dyspnoea was much relieved temporarily but the tumor gradually increased until in eleven days it had attained its former size. Under chloroform anaesthesia an incision  $4\frac{1}{2}$  inches long was made over the tumor. The omental covering was divided and the cystic portion tapped, 20 ounces of fluid being removed. The large intestine had to be carefully separated from the capsule and a large number of veins ligatured before



the tumor could be removed. Nutrient enemata and transfusion caused the child to rally from the profound shock following the operation, but later in the day it had an attack of vomiting and died. There was no definite attachment of the tumor to the vertebral column, or any of the surrounding tissues except general adhesions. The kidneys, suprarenals, uterus, ovaries, etc., were all normal and healthy.

One side of the solid portion of the tumor was covered with skin, and a few dark hairs were attached to one portion of it. In the grooves was a substance resembling vernix caseosa. Two projections on the sides resembled two-digitated rudimentary hands or feet. There were one or two slits or openings through which a probe could be passed into the substance of the mass. The other side of the mass was a coil composed of two pieces of intestine; near, but not connected with them, was a small, thick walled cyst, which, when cut, showed its inner wall marked with numerous distinct ridges, resembling the stomach. Sections of the intestines under the microscope showed characteristic villi, epithelium, and glands. A rudimentary maxilla containing tooth germs and two teeth were found in the mass. Under the microscope the skin had the usual appearance except for the lack of sweat-glands and ducts, and the main tissue had the appearance of foetal adipose tissue.

*Fourteen and a Half Hours' Artificial Respiration in a Child One Week Old; Recovery.*

GEO. E. KEITH (*The Lancet*, November 24, 1900) reports the case of a healthy baby, one week old, on whom he performed circumcision. The child did not breathe well under the chloroform and bled more than usual, but slept several hours and awoke looking natural. In the evening he screamed for about two hours, then became quiet, took the breast but soon vomited. He passed urine freely. He fell asleep before midnight. At 3.15 A.M. the nurse noticed that the breathing was labored and the face cyanosed. The writer was summoned but the child stopped breathing a few seconds after his arrival. As the heart was still beating artificial respiration was tried and within a few minutes natural breathing was resumed but soon stopped, when artificial respiration was again resorted to with good results temporarily. As soon as the artificial respiration was stopped for a few minutes, breathing ceased. The forced respiration was kept up, therefore, hour after hour, until about noon the next day; with every breath there came a creak, showing that the lungs were filling with fluid; the heart also com-

menced to fail. Fortunately, by this time cylinders of oxygen arrived from London and a slight stream of oxygen was directed against the child's nose and mouth, and very soon the fluid sounds died away and the heart beats increased in strength and regularity. Three hours later there were feeble efforts at inspiration and in two hours more the child began to breathe. The child had been kept as warm as possible with blankets and hot-water bottles, and the lips had been moistened with brandy and milk. After normal breathing commenced twenty drops of brandy in water was given every hour for fifteen hours. The oxygen was kept up throughout the next night and day, as the child became cyanosed when it was stopped. The temperature the next morning was 103.6° F. and one grain of antitoxin (?) was given, reducing the temperature two degrees. The child remained in an alarming condition for four days, oxygen being required much of the time and the temperature reaching 105°. This was reduced by more antitoxin (?). The child could not nurse and brandy and Walker-Gordon milk was dropped into his mouth. The bowels were moved with gray powder, but the movement was very offensive and there seemed to be much colic. Ten drops of fluid magnesia every two hours improved this condition. On the fourth day respiration suddenly stopped and artificial respiration was resorted to for a short time. After this attack there was no further trouble and now, at three months of age, the child is perfectly well. The condition of the child's chest and arms was pitiable after the manipulations, but the excoriations soon disappeared.

---

## GYNÆCOLOGY.

## UNITED STATES.

*Treatment of Retrodisplacements of the Uterus.*

EDWARD MCGUIRE (*Richmond Jour. of Practice*, November, 1900) says that while uncomplicated retrodisplacements may exist without causing any unpleasant symptoms, such cases are rare. Metritis, endometritis, pelvic peritonitis, adhesions, tumors or lacerations cause the uterus to sink downward by weight or traction. A correct recognition of the exact conditions present is often difficult even with the patient under an anæsthetic. The size, position, inclination and mobility of the uterus, the condition and position of the appendages, and the presence or absence of adhesions or lacerations must be carefully noted.

Many cases are due to conditions following childbirth and are curable if the proper treatment is pursued. Lacerations of the pelvic floor, perinæum, and cervix must be repaired. Every obstetrical case should be examined a month after delivery; if retrodisplacement exists a suitable support and local depletive measures at this early stage will usually result in a permanent cure. If endometritis exists curettage is advisable. Inflammatory conditions require preparatory treatment before replacement can be effected. The fundus may be raised and kept in place with a packing of lamb's wool, while other depletive measures are tried. Where adhesions exist any method of reposition must be attempted gradually with the use of massage. The use of a sound or repositor is condemned. When complications and malposition have been overcome the smallest sized pessary that will keep the cervix up in its normal position should be used. A pessary that distends the vaginal wall, or one with a curve so acute as to lift the uterus above the normal level is dangerous. In seventy-five cases requiring operative procedures the ligaments were shortened intra-peritonæally in six cases, while *suspensio uteri*, as practiced by Kelly, and the Alexander operation, as performed by Edebohls, were about equally practiced in the remaining cases. The mortality was *nil*. Where the conditions existed, a perineorrhaphy, a trachelorrhaphy or a curettement was done prior to the operation. Alexander's operation has the

following advantages: (1) There is less risk of infection, and if it did occur it would be local, while in the other operation it might mean a peritonitis. (2) It is preferable from the standpoint of possible future pregnancy. (3) It supports the uterus by its natural ligaments and forms no intra-peritonæal adhesions.

Its disadvantages are: (1) There are two incisions instead of one, and when the cavity is entered through the dilated rings there is some risk of hernia. (2) The operation is limited to cases where no adhesions exist, and this is not always easy to determine beforehand. (3) In cases associated with marked prolapse it is not usually satisfactory. (4) It cannot be depended upon where the ovaries are also prolapsed. (5) In cases of extreme attenuation of the ligaments there is some difficulty, but a skilled surgeon can usually overcome this.

The advantages of *suspensio uteri* are: (1) It permits the inspection of the peritonæal cavity and affords an opportunity for the conservative or radical treatment of diseased appendages and the separation of adhesions. (2) In cases of uterine or ovarian prolapse it lifts the uterus and appendages to a higher level. Its disadvantages are: (1) The greater danger at the time of operation and from the subsequent adhesions. (2) It fixes the uterus in an abnormally anteflexed position. (3) Adhesions to the bladder sometimes follow, or the pressure, as the bladder is distended, may cause dysuria. (4) Abortion or difficulties of labor occur in a small per cent. of cases where pregnancy follows the operation.

Intra-peritonæal shortening of the ligaments possesses all the advantages of *suspensio uteri* except in cases of decided prolapse.

#### *The Relative Value of Curettage and Local Applications to the Endometrium.*

HENRY T. BYFORD (*Wisconsin Med. Recorder*, November, 1900) says that curettage in cases of septic infection is seldom curative and should be used only to remove foreign material, and in the puerperium, with retained and adherent secundines, the finger-nail is better than any instrument. The danger of curettage in cases of recent infection is the opening up of fresh avenues for the spread of the infection. In cases free from infection in which hyperplasia or hypertrophy of the mucosa lining the uterus takes place, and which are usually hæmorrhagic or characterized by abundant thin mucous discharges, the redundant tissue should be curetted away and astringent or mildly escharotic applications should be made. A repetition of the curettage



is often necessary. Chronic cases of endometritis are best treated by drainage and disinfection, with stimulation of the inflamed surfaces. In many cases the swelled mucosa so fills the narrow lumen of the internal os as to interfere with free drainage. In these cases the treatment should consist in keeping the cervix dilated by the passage of sounds twice a week and in disinfecting the uterus with a 25 per cent. solution of ichthyol in glycerine. An application of glycerine, 1 part; 95 per cent. of carbolic acid, 2 parts, and iodine crystals, 1 part, to the vaginal portion of the cervix and lower half of the cervical canal is also advisable. In very chronic cases where the inflamed mucous membrane cannot be restored cauterization, by promoting cicatrization, may hasten the cure. A 35 per cent. aqueous solution of chloride of zinc works well in many cases. A mildly antiseptic vaginal douche twice daily, taken in any position most convenient to the patient, aids in obtaining and maintaining uterine asepsis.

*The Fate of Sponges, Ligatures and Other Foreign Bodies in the Peritonæum.*

CARL BECK (*The Chicago Med. Recorder*, November, 1900) says that foreign bodies left in the abdominal cavity may be (1) absorbed, (2) encysted, (3) or possibly enter either the intestine or uterine cavity. While sponges or compresses are left by accident in the abdomen, silk and other unabsorbable ligatures are often used designedly and may cause equally serious trouble. The fate of these silk ligatures has been studied and discussed by various able surgeons. Most of the writers think that the ligature remains encysted for a long time, others think that in due process of time it becomes absorbed, but the experiments conducted upon dogs and other animals seem to demonstrate that where it does not become encysted it passes out of the body after suppuration and entrance into the intestines, the uterus or even the bladder. A child operated upon for hernia by isolation of the sac and ligation with sterilized silk was brought back six months after the operation for pain and symptoms pointing toward the bladder. Examination revealed a stone, which upon removal proved to be an encrusted silk ligature. In a second case a large, tender tumor, the size of a child's head, was found in the abdomen. The patient suffered great pain, especially when the bowels moved. A diagnosis of inoperable cancer had been made. The tumor was found to be a large convolution of the infiltrated omentum, adherent, in the center of which a loop of small intestine, bent in a right angle, was imbedded.

The convex side of the intestine was perforated and on the omental side a ligature of thick silk protruded into the bowel from a granulating cavity. An operation for hernia had been performed six months before in which the omentum had been ligated with strong silk and the stump pushed into the abdomen. In a third case, operated upon for double pyosalpinx, silk ligatures were used. In separating the tubes from their adhesions to the bowel, the latter was stripped of its coatings. Later on this patient came for treatment for a profuse leucorrhœa, a trouble which had not existed before the operation. Curettage revealed a silk ligature in the uterus, and the discharge was cured by its removal. Several months later a fæcal fistula formed, occasioned by the breaking through of another ligature into the bowel. Similar cases may be found reported by other surgeons.

This process of sloughing of silk material into various organs must be considered (1) as to its symptoms and (2) as to its sequelæ.

The process may go on without any significant disturbance, or hæmorrhages may occur from the bowel, the bladder or the uterus. Where the ligature or any foreign body passes into the bowel there may be also tenesmus and foul rectal discharges or stercoral fistula with an abscess. When the body passes into the bladder or the pelvis of the kidney a stone may be formed, giving rise to the usual symptoms.

In the intestine a small scar, if the process is completed, may be without significance, but if two portions of bowel are connected which are far apart, for instance, duodenum and colon, then the fæcal fistula may be very serious, as all the food passes the short road.

Absorbable sutures should be used as much as possible, but if unabsorbable sutures must be used the thread should be as small in size and quantity as possible, and interrupted sutures should be used in preference to the continuous. If the sloughing of a buried suture is suspected a way for the thread should be opened at once, that it may not take a dangerous route.

*An Operation devised for the Treatment of marked Prolapse of the Rectum in Women.*

J. WESLEY BOVÉE (*N. Y. Med. Jour.*, November 17, 1900) says that many plastic operations and ingenious devices have been resorted to for the relief of exaggerated rectal prolapse. Resection of the rectum from below was the best plastic procedure, but this failed even when repeated. Jænnel, in 1889, originated the idea of elevating and

fixing the colon to an artificial anus wound in the iliac region. In 1897 Bryant published records of twenty-nine cases, including his own, operated upon by this method, all of which were primarily successful and in only one case was there even a partial return. The objections to this operation are the annoyance of the artificial anus, the difficulty in its subsequent closure, and the danger of ventral hernia at the site of the colotomy.

The case reported by the writer was a Sister of Charity, thirty-five years old, who had been treated unsuccessfully for several years for prolapse of the rectum and uterus and hæmorrhoids. There were large internal and external hæmorrhoids, and a protruding roll of fully three inches of the rectum, that was thickened and discolored. The uterus was normal in size but prolapsed. The operation performed was as follows: The hæmorrhoids were first removed, then the abdomen was opened. The left ovary was cystic. Both appendages were removed and the uterus was firmly fixed to the abdominal wall by four strong interrupted catgut sutures, which passed through a considerable portion of the uterine fundus at the top and the principle fascia of the abdominal wall on either side of the incision. The rectum was then drawn upward until fairly tense and sutured to the cul-de-sac and posterior wall of the uterus up to the abdominal wall by a running catgut suture. The retro-uterine pelvic cavity was thus divided into two equilateral spaces. Eight months later there had been no return of the prolapse.

The removal of the appendages was not necessarily a feature of the operation, yet sterility should be assured to render this operation practicable or justifiable, for the firm attachment of the uterus to the abdominal wall would not be consistent with safe child-bearing. This limits the field for this method, but in certain cases it should work well.

#### *The Value of Thermal Carbonated Saline Baths in Gynæcology.*

S. W. BANDLER (*Medical Record*, November 24, 1900) says that in gynæcological practice many cases, even those with severe symptoms, should have conservative treatment for several reasons: (1) because the local affections do not justify operation; (2) considerable improvement may follow continued treatment; (3) because the patient desires children; (4) such treatment is a valuable preliminary to subsequent operations; (5) because in many cases the local affection is only a part of a general weakened physical state.

In this class are included certain forms of metritis, salpingitis, pelvic

peritonitis, hydrosalpinx, etc., usually combined with displacement of the uterus, adnexa, kidney or stomach, and with a condition of chronic congestion or venous stasis in the pelvis and general reflex and constitutional symptoms. Rest, the toning up of the muscles and the restoration of a normal circulation are required in these cases. In the above baths we have an excellent means of relieving congestion and promoting the absorption of exudates.

A full warm bath increases the rapidity of the heart's action but also increases resistance in the minor circulation so that no real betterment of the circulation results, nor is there any stimulating effect on the central nervous system. Cold fresh-water baths, on the other hand, must be accompanied by a mechanical frottement of the skin during and after the bath to bring about a complete reaction, and many patients cannot stand the first shock of the cold water, while the increased tissue metabolism is not great and the effect of the bath lasts but a short time. But by substituting for the thermal and mechanical stimuli chemical stimuli, the shock of the cold water can be overcome by chemical ingredients which exert a frottement of the entire periphery, with a decided increase in the processes of oxidation. Such baths bring about a lasting protection and rest to the heart and improve the circulation. Zunto found in three per cent. saline baths that fifteen per cent. more oxygen was used and twenty-five per cent. more  $\text{CO}_2$  was given off as compared with a fresh-water bath. When beside the salt, calcium chloride is added, the peripheral vessels are dilated, carrying the blood into the vessels of the muscles, relieving the interior of the body from congestion and causing increase of tissue metabolism. This tissue change increases the demand for nutrition and is accompanied by an increase in the kidney secretion. The excretion of urea is somewhat increased, while the excretion of phosphoric acid is diminished. The frequency of the pulse and respirations is diminished. The proper amount of chemical stimuli in each bath must be determined for each individual; nervousness, loss of sleep and appetite, and increased excretion of phosphoric acid are evidences of too strong baths.

The value of these baths in rheumatic and gouty cases is well known, and they are proving to be of equal value in amenorrhœa, in insufficient development of the genitalia and lack of muscular tone of the uterus, with or without chlorotic symptoms. Uterine catarrh is greatly benefited; often after a bath large amounts of mucus are discharged, caused by increased secretion and a stimulation of the uterine contraction. This latter action explains the value of the baths in subinvolution. Cases of chronic metritis after repeated abortions or



during the menopause should not receive these strong saline baths. Nervous and anæmic cases must receive graded treatment.

A case of pelvic cellulitis of gonorrhœal origin, with complete infiltration of the pelvic and parametric and perimetric tissue, where it seemed as if the whole lower part of the pelvis were filled with plaster of Paris was sent to Nauheim as a test case after local treatment and rest in bed had failed to give relief. After four weeks, during which she received twenty-two baths, gradually increasing to the "Sprudel" bath, the improvement was remarkable both as to her local and general condition. Twenty patients, the majority of whom were suffering from pyosalpinx, were then put on this treatment. Baths were given on three successive days, followed by a rest of one day, then three more baths. No baths were given during menstruation, so that each patient received eighteen baths. The baths were begun at a temperature of  $27^{\circ}$  R., lasting eight minutes, and contained half the strength of  $\text{CO}_2$  contained in a Sprudel bath. The temperature was gradually lowered on succeeding days but never below  $22^{\circ}$  R., the amount of  $\text{CO}_2$  being increased with the lower temperature.

The cases were examined every other day and disclosed a most rapid resorption of exudates and infiltrations, and a decided diminution in the size of the adnex tumors. In one case the patient decided on operation after nine baths had been given and double salpingectomy was performed. The adhesions were so softened and loosened and the infiltration of the parametrium so slight that the operation was greatly facilitated. In not a single case was there a failure of resorption of the exudations about the tube, and in every case the tubes were reduced to the thickness of the finger, while the ovary could be distinctly felt and separated from the tubes. Diminution in pain and tenderness was experienced in every case.

*On the so-called "Irritable Bladder" in the Female.*

FREDERIC BIERHOFF (*The Amer. Jour. of the Med. Sciences*, December, 1900) says that this name is applied to that condition in which there is an abnormal frequency of urination accompanied by a varying degree of tenesmus, yet where neither cystitis, diabetes nor nephritis exist to account for the symptoms. Some have considered this condition a pure bladder neurosis, but careful examination, gynæcological as well as urological, of a large number of cases has convinced the writer that these cases rest upon some tangible abnormal condition of

either urethra, bladder or neighboring organs. The frequency of urination and the amount of pain and discomfort vary greatly. The amount of urine passed in twenty-four hours is about normal, although the amount passed at each urination varies from a few drops to a reasonable quantity. The reaction may be alkaline, neutral or acid, an argument against the theory that this condition is due to "highly concentrated urine." The composition is usually normal, but it may be turbid from phosphates or present a flocculent clouding due to mucin, squamous epithelia of the bladder and a few leucocytes. A very small number of bacteria are sometimes found, but not enough to constitute bacteriuria.

In a careful examination of a series of fifty-seven cases the causes were as follows:

Hyperæmia, alone or as an accompanying condition, in 14; vesical varices, alone or as an accompanying condition, in 5; cystitis, alone or as an accompanying condition, in 27; pericystitis, as an accompanying condition, in 27; pregnancy, with accompanying conditions, in 5; cystocele, alone or complicating other conditions, in 4; malpositions of the uterus, in 10; carcinoma, extra-vesical, in 3; tuberculosis, vesical, in 1; nervous conditions, as accompanying conditions, in 4.

In forty-six cases there was either an inflammation or a hyperæmic condition of the mucous membrane present, and in only one case were nervous symptoms present without an appreciable vesical or peravesical cause.

The diagnosis must be one of exclusion and cannot rest upon a mere examination of the bladder. Systematic search must be made for diseases or abnormalities of the neighboring structures. The details of such examinations need not be entered upon here. In examination of the bladder the use of the sound as a means of diagnosis can only be spoken of as antiquated, unwarranted, and dangerous. Ocular examination will suffice for the external urethral orifice and to determine the presence or absence of a discharge, which must, if present, be microscopically examined. For the examination of the rest of the urethral canal a Nitze-Oberländer endoscope is the best. The same sized tubes should be used as in the male, for although the female urethra can be considerably dilated without much pain, the meatus cannot. In inflammatory processes the membrane is deeper red, loses its glistening brilliancy, and the folds are more or less obliterated. Fissures are usually marked by a pearly-gray line on either side of the line of rupture. The appearance of polypi, papillomata, and urethral caruncles are known. The Nitze instrument is also preferable for cysto-

scopic examination. It should be placed in a 2 or 3 per cent. solution of holzin (a 60 per cent. solution of formalin in alcohol) for ten minutes. This preparation is a powerful germicide, is non-irritant, non-toxic, and does not injure the instruments. After drawing off the urine and irrigating the bladder with a 1 per cent. boric acid solution, a quantity of the same solution sufficient to gently distend the bladder is introduced, the cystoscope, without being dried from the holzin solution, is lubricated with sterilized glycerine and inserted. After the examination is completed the lamp is extinguished and the instrument withdrawn when cool. A small amount of the boric acid is left in the bladder, or where there is a local cystitis or bacteria it is all removed and 50 grammes of a  $\frac{1}{4}$  per cent. solution of nitrate of silver is injected and allowed to remain for five minutes. After this has flowed out the bladder is again irrigated with the boric acid solution until it returns clear, when 50 grammes more of the same are injected and allowed to remain.

*Cystoscopic Diagnostic Features.* (1) *Hyperæmia.* The mucous membrane over the parts involved is reddened, caused by a dilatation of the minute blood-vessels. The individual vessels of the network can be distinguished and according to the severity of the process the larger or smaller vessels will be seen to be involved. This condition may be due to direct irritation of the mucous membrane or secondary to pelvic congestion or pressure from some organ. Vesical hyperæmia and hyperæsthesia may accompany menstruation, pregnancy, coitus, etc. (2) *Vesical varices.* This condition usually occurs as an accompaniment of pregnancy or a tumor. The larger veins become dilated from pressure until in severe cases they are visible as tortuous, bluish-red cords rising above the level of the surrounding mucous membrane. (3) *Cystitis.* The writer believes that true "catarrhal cystitis" does exist. The urine does not contain pus, but there are epithelia, mucous strings, bacteria, and leucocytes. The mucous membrane is reddened, especially at the sphincteral margin, the surface swollen, irregular, and sometimes marked by small, hæmorrhagic extravasations, which bleed at the slightest touch. In some cases there is diffuse hypertrophy of the papillæ at the trigonum. In all but one of the twenty-seven cases presenting evidence of catarrhal cystitis, the process was confined to the fundus of the bladder, or to this, in some cases, with additional small, circumscribed areas elsewhere. (4) *Pericystitis.* This is usually a part or a result of a preceding perimetritis or parametritis. The processes affect only, or chiefly, the lower portion of the posterior and postero-lateral parts of the bladder wall. When the exudate is recent

there are no local changes recognizable with the cystoscope. The process of filling the bladder is difficult and painful. Where the exudate has become organized the distortion of the bladder wall due to the connective-tissue strands is evident, resulting either in a pocket-like formation, or the mucous membrane is stretched over the prominent bands. These conditions are similar to peritonitic adhesions and by limiting the expansibility of the bladder wall cause a tendency to frequent urination. (5) *Pregnancy*. The pregnant uterus is seen protruding as a large mass into the bladder cavity, which assumes a crescentic form. The mucous membrane is marked with striæ, and often there is a tendency to varicosities toward the neck of the bladder. (6) *Cystocele*. No inflammatory changes occur, but the shape of the bladder is decidedly changed. If the distended and prolapsed viscus be replaced the site of the prolapse will be found folded and creased at the margins. (6) *Malpositions of the uterus, etc.* These are diagnostic only when the cervix or body press on the bladder, and are then recognized by the forward pressure on the lower portion of the bladder. (7) *Carcinoma*. Seldom primary, but often an extension of the neoplasm from neighboring structures. The trigonum is usually attacked. The entire bladder floor is lifted into smooth, rounded folds extending transversely and usually beyond the trigonum, overlapping it laterally and posteriorly. The urethral orifice is hidden in the folds. The mucous membrane has an œdematous appearance and is often covered with vesicles or bullæ. In later stages ulcerations appear. (8) *Tuberculosis*. The local phenomena are the small, gray, tuberculous nodule, the tuberculous ulcerations and ecchymosis, visible mostly near the urethral orifices and the fundus. (9) *Calculi and tumors*. The former are of comparatively infrequent occurrence in the female, and both classes are readily recognized.

*Prognosis*. The duration depends upon the underlying cause. The non-recognition of the causative factor may lead to other and graver sequelæ. The best results may be expected in cases of uncomplicated local cystitis. Pericystic conditions are more resistant to treatment, although improvement begins soon with proper treatment. In carcinoma and tuberculosis the prognosis is that of the parent disease.

*Treatment*. The vesical changes and underlying causes must both be treated. The diet need not be modified except to forbid alcoholic beverages. Caruncles and condylomata are removed with the scissors and the base cauterized. Fissures are cauterized in the endoscopic tube. Catarrhal urethritis must have the direct application of astringent solutions, and gonorrhœal of protargol either in water or glycerin solu-



tion. Simple hyperæmia should receive one per cent. boric acid irrigation, followed in bad cases by the instillation of  $\frac{1}{4}$  per cent. nitrate of silver solution. Cystitis should be similarly treated but with a stronger silver solution and moderate doses of urotropin by mouth. Distension of the bladder with boric acid solution to the limit of causing pain and tenesmus, retaining the solution for three minutes, then allowing it to flow off until only a small quantity remains, is the treatment for pericystitis. The quantity of fluid may be increased slightly each day. This the writer terms "massage." Carcinoma is usually inoperable and local treatment is apt to increase suffering. In tuberculosis the local treatment varies from injection of nitrate of silver solution or iodoform emulsion to *sectio alta* with subsequent curettage, excision, or cauterization of the affected mucous membrane. Malpositions and diseases of the uterus and adnexa as well as cystocele must be treated by the gynæcologist.

#### *Report of a Case of Deciduoma Malignum.*

DANIEL PETTIGREW (*The Quarterly Med. Jour.*, November, 1900) says that deciduoma malignum was first described by Säger in 1889, and several varieties of the disease have since been noted. The clinical histories and the microscopical examinations support the view that it is essentially a sarcoma arising in the site occupied by the placenta, is a disease of post-parturition, while the majority of cases have occurred in young women, more often after abortion than full-time pregnancies.

The case reported was a married woman of 26, who was seen two months after her fourth pregnancy. She was anæmic and complained of shortness of breath and excessive and continuous menorrhagia, which had lasted since the confinement. She declined a vaginal examination. Rest in bed, hot douches, and a mixture containing hamamelis and ergot were ordered. Taking of the medicine for a short time was the only part of the treatment followed. Two months later the writer was called to see the baby and found that the mother had lost twenty-eight pounds in weight; there was pyrexia, ranging from  $100^{\circ}$  to  $102^{\circ}$  F., a rapid pulse, anorexia, and insomnia; the menorrhagia had continued and was mixed with an offensive discharge, accompanied now and then by small lumps of a fatty-looking substance, the passage of which caused terrible pain. She was still averse to an examination but finally consented. The cervix uteri was found to be replaced by a soft, fungous mass, the vaginal walls were exceedingly tender and, although the case was evidently far advanced,

hysterectomy was advised as the only hope of relief. The uterus, removed per vaginam, resembled a mass of retained placenta, and under the microscope showed the sarcomatous nature of the disease. The disease had invaded the broad ligaments, and the patient died in two months after the operation. There was relief from the pain but the discharge returned two weeks after the operation and there were several severe hæmorrhages. Secondary implication of the lungs took place. Her mother died of carcinoma of the breast, but the patient had been in perfect health until the birth of the last child.

---

## OBSTETRICS.

### UNITED STATES.

#### *Pregnancy and Heart Disease.*

GEORGE C. SEERS (*St. Paul Med. Jour.*, November, 1900) reports a series of fifteen cases coming under his personal observation, and since most of them were seen in consultation they probably represent rather more serious types of heart trouble than the average. These fifteen cases were nineteen times pregnant under the writer's observation, while other pregnancies had occurred before and since. The histories show that the course of cardiac cases under repeated pregnancies is not necessarily that each successive pregnancy is followed by more serious manifestations, as a pregnancy with severe cardiac symptoms may be followed by one in which they are hardly noticeable, yet the ultimate result is usually a decidedly weakened heart. Of these cases six had mitral stenosis, two mitral regurgitation, three had both: there was one case of aortic regurgitation and three of combined aortic and mitral lesions. Two patients died, one with mitral stenosis and one with a double mitral lesion. In five cases it was absolutely necessary to induce abortion and of these all had mitral lesions. While mitral lesions are grave complications of pregnancy, yet one case is reported of double mitral disease acquired before marriage, who had been pregnant thirteen times, once with twins. The successful issue of all the cases of induced labor, even when the cardiac dilatation was so extreme as to cause tricuspid regurgitation, and the fatal result which twice followed an expectant policy gives reason to

class heart disease among the conditions in which the presence of the foetus is an immediate source of danger and in which abortion is justifiable. Those patients in whom the signs of failing compensation did not appear until the latter half of pregnancy all recovered, even though alarming symptoms occasionally arose, while those in whom serious symptoms developed during the first four months either died or passed through great danger during or after labor.

The question as to the advisability of marriage for women with cardiac lesions is frequently asked, but the advice given is rarely followed by the interested parties. The danger is not necessarily great where a small lesion (especially if it be aortic) is well compensated. But the liability to broken compensation in mitral stenosis under the strain of pregnancy and the sudden and often unexpected onset of very grave symptoms makes it possible that marriage should rarely, if ever, be sanctioned by a physician in that condition. Cases of mitral regurgitation should be carefully studied before the permissibility of marriage is positively stated.

*Some Forms of Auto-intoxication observed during Pregnancy and the Puerperium.*

W. E. FOTHERGILL (*Medical Brief*, November, 1900) says that the pregnant woman is in a physiological state in which she is peculiarly liable to suffer from auto-intoxication due to the greater amount of chemical change going on within her system. The minor symptoms of pregnancy, nausea, salivation, neuralgia, irritability, constipation, dyspepsia, pigmentation, etc., are nothing more or less than indications of a mild toxæmia. In some women the excretory organs respond promptly to the additional strain put upon them, and few, if any, of these symptoms appear. The disappearance of many of these annoying symptoms as pregnancy progresses shows that in most cases the organism after a little adjusts itself to the new conditions, and the equilibrium between the production and elimination of toxins is restored. In other cases the organs fail to rise to the occasion and the auto-intoxication manifests itself in graver symptoms. Climate and heredity are important factors in some of these cases, in others the history of pre-existing renal disease, dyspepsia, constipation, or liver troubles shows the etiology. Defective action of the liver is often due to tight lacing during adolescence; this is sometimes persisted in during several months of pregnancy with disastrous results.

The slight ailments above mentioned should never be regarded as too trivial for the careful attention of the physician. Periodic estimates of the quantity of urea excreted daily will give a fair indication of the condition of the patient. A sudden rise in the percentage of urea followed by a marked diminution, especially if accompanied by the appearance of albumin, calls for active treatment. Corsets and tight bands about the waist should be discontinued and loose, warm garments of a porous texture should be worn. Outdoor exercise stopping short of fatigue, and well ventilated but warm rooms facilitate the excretory action of the lungs and skin, while frequent hot baths are of great importance and should be persisted in by patients who show toxic symptoms, even at the risk of terminating pregnancy abruptly. Tea, coffee, alcohol, and beef extracts should be avoided, and but little animal food allowed. Nitrogen can be supplied by the use of peas, beans, and lentils. Calomel, salines and the drinking of large quantities of water are the best treatment for the liver and kidneys. Rectal irrigation is valuable. Where the secretion of urea remains scanty, rest in bed and a rigid milk diet must be insisted upon. Insomnia is always a grave symptom. Termination of the pregnancy should be saved for a last resort.

#### *A Case of Fœtal Anasarca and Strangulation.*

A. W. CARSON (*Obstetrics*, November, 1900) was called to a patient in labor in the seventh month of her pregnancy. Her three previous labors had been normal. The cervix was soft and dilatable, and dilated to the size of a silver dollar. The membranes had ruptured. It was evidently a head presentation, but the scalp pitted wherever pressure was made. The cervix became fully dilated and the head was delivered followed, with some assistance, by the body, and then by a large quantity of fluid, saturating the bed. The child seemed as large as a full-term infant, due to the extreme distension of the cellular tissue with fluid. The cord was wound around the neck once in a deep sulcus, was small, and had broken off close to the placenta. The head was deeply congested, while the rest of the body was waxy and white, pitting everywhere on pressure. Both the thorax and abdomen contained fluid. There were no visible deformities and no autopsy could be obtained. The placenta was twice the normal size, friable, and of a greasy feel. The child died after a few ineffectual efforts at respira-



tion. There was no hereditary or constitutional disease in either parent.

*A Contribution to the Treatment of Rupture of the Uterus.*

H. SCHMIT (*Ibid.*) says that the treatment of uterine rupture is still an open question. The rule as to the method of delivery is to deliver by the quickest method consistent with the least injury to the maternal structures. Where the fœtus is still in the uterus it can usually be delivered by the vagina, especially if embryotomy is performed; but if it has escaped into the abdominal cavity, laparotomy is necessary. The after-treatment of cases delivered per vaginam is a matter of considerable disagreement.

The history of nineteen cases of rupture of the uterus treated at Schauta's clinic in Vienna, where the writer is assistant, is fully given. In studying these cases from various standpoints the cause may be first considered. This could not be determined with any degree of certainty where the patients were brought into the clinic after rupture had occurred, but in the majority of these cases repeated fruitless attempts at delivery were sufficient to account for the accident. In four cases occurring at the clinic, three were spontaneous, one being the rupture of an old Cæsarian section incision. The fourth case at the clinic followed version. There were ten complete and nine incomplete tears, thirteen of which were longitudinal or oblique and six transverse. Of the complete, five were upon the anterior wall and four upon the posterior. In three instances the fœtus escaped into the peritonæal cavity, one of these being the Cæsarian section case. In one case the placenta escaped into the peritonæal cavity. In nine cases coils of intestines prolapsed into the uterine cavity, but were replaced and the site of the rupture tamponed. In one case of spontaneous rupture there was also an extensive rupture of the bladder.

Seven of the nine cases of incomplete rupture were treated by drainage; in the eighth case the rupture was not clinically recognizable and the patient died of phlegmonous cellulitis and anæmia on the second day after delivery; the ninth case was in collapse when brought to the clinic and died from the effects of hæmorrhage while preparations were being made for a laparotomy. Of the seven cases treated by drainage only two died. Of the ten cases of complete rupture four were treated by operation and six by drainage. The mortality in both was 50 per cent., showing the greater danger of complete rupture. In the nineteen cases there was a mortality of 47.37 per cent. In the

cases treated operatively the mortality was 50 per cent.; in those treated by drainage 38.46 per cent. The favorable results of drainage as compared with operation coincide with the results of the statistics published by Piskacek, Koblanck, Schroeder, and others.

The principal sources of danger in uterine rupture were formerly supposed to be hæmorrhage and shock, but it is now generally recognized that sepsis (septic peritonitis) is the great danger. In the deaths reported above sepsis was the cause in eight cases and hæmorrhage in but one. Confirmation of this is afforded by the fact that in rupture occurring after the patient's admission to the clinic the prognosis and result is uniformly favorable. This also explains the greater mortality in operative cases, for after rupture the infected foetus must be extracted through the peritonæal cavity, coming frequently in contact with the bowel and spreading the infection, causing the apparently ideal operation of laparotomy and suture of the uterine rent to yield bad results.

In cases of uterine rupture where the foetus is still in the uterus there is the most favorable opportunity for perfect drainage, a broad opening being already at hand, and the iodoform gauze serving for drainage and an antiseptic dressing. In cases of complete rupture the gauze can be passed through the rent for a short distance into the peritonæal cavity, thus not only preventing any prolapse of the intestines, but draining the adjacent portion of the peritonæal cavity. In the case complicated by rupture of the bladder drainage with iodoform gauze gave good results, the fistula being afterwards cured by operation. The gauze is used for drainage only, not for hæmorrhage. The strips of gauze were removed one by one during the eight days following the operation. Analeptics and ice-bags were used during the puerperium. Meteorism was an annoying and frequent complication, probably due to a transitory paralysis of the bowels caused by slight infection. Vigorous high irrigation of the bowel afforded the best means of combating this trouble.

Where the size of the rent or severe hæmorrhage demands operative treatment by the vaginal route is preferable. Fritsch says that if an arbitrary rule for every case needed to be made the results of not operating at all would be better than those of operating in every case.

#### *Obstetrical Paralysis, Infantile and Maternal.*

H. M. THOMAS (*Bulletin of the Johns Hopkins Hospital*, November, 1900) says that the force required to complete the act of partu-

rition is, at times, a source of danger to the peripheral nerves of both the mother and child. During the past year five cases of traumatic obstetrical paralysis have come under the writer's observation, two occurring in the mothers and three in babies; in one instance both mother and baby were paralyzed at the same labor. In *Zeitschrift f. Geburtshülfe u. Gynäkologie*, Schoemaker of Nymwegen reviewed the subject carefully after giving a report of two cases and the history of various experiments on the cadaver. He found that if the child's neck were stretched in the direction of the axis of the body the upper roots of the brachial plexus were put upon tension not materially increased by bending the head forward or backward or rotating it, but very much increased if the head were bent laterally, the fifth root being most stretched, the sixth next, and the seventh and eighth much less. The fifth and sixth roots of the brachial plexus were constricted when the shoulders were compressed and pressed upwards, and especially when the arms were elevated above the head. The constriction occurred between the clavicle and the transverse process of the sixth cervical vertebra, being so great as to make an indentation in the nerve roots. If forceps were applied at an angle of about 30 degrees Erb's point was compressed. In labor, in head presentations, the first danger is from pressure by the clavicles, but this is slight unless the shoulders are compressed and pressed toward the head. After the head is born and hanging over the perineum, with the woman on her back, the plexus may be injured by stretching, and if traction is made with the head bent toward one shoulder there is great danger of overstretching the plexus. Where the obstetrician's fingers are placed in the axilla and strong traction made to deliver, the clavicle may be raised and the plexus be compressed against the spinal column. In forceps cases the danger from overstretching is greater than that of direct injury to the nerves from the instrument. In breech cases constriction and pressure of the shoulders is especially liable to occur.

From a neurological standpoint it is difficult to understand why an injury to the brachial plexus should cause a paralysis limited to just these muscles, the infraspinatus, the deltoid, the supraspinatus, the biceps, the brachialis, and the supinator longus. The best explanation would seem to be that although all muscles receive fibers from several spinal roots, their movements are represented particularly in one or two roots, and an injury of these special roots causes a paralysis of those muscles which are most represented in them. Only two cases have had autopsies carefully performed, and they did not settle the points in question.

In the three cases of paralysis in infants the head presented and in two cases forceps were used. In the case where forceps were not used strong lateral flexion of the neck with traction on the head undoubtedly gave rise to the injury. In the second case the right arm was delivered after the head, and traction was made upon it, which may have elevated the clavicle so as to compress the nerves. In the third case strong traction with lateral flexion of the head was used. One child died at the age of nine weeks. In this case no improvement had resulted from the use of electricity and massage, and no autopsy could be obtained. In the other two cases the galvanic current, passive movements and massage resulted in complete recovery before either child was six months old. Very little has been written on the subject of paralysis in the mother due to the traumatism of labor. Hünemann, from a study of four cases in the obstetrical clinic at Berlin, concluded that such paralysis affected exclusively or most intensely the muscles supplied by the external popliteal nerve, as this nerve receives its fibers mostly from the fourth and fifth lumbar roots, and these, after forming the lumbrosacral cord, as they pass over the brim of the true pelvis to join the sacral plexus, lie next the bone and are exposed to pressure.

In the two cases of maternal paralysis reported the pregnancy was normal but labor severe and instrumental. In one case the pelvis was normal but the child large, in the others the pelvis was generally contracted and the child very large. In this case the child was also paralyzed. In the first case there were symptoms of nerve compression (sciatic pain) before the forceps were applied, and in both cases intense pain on the outer side of the leg below the knee and on the back of the foot was complained of as soon as the woman came from under the influence of the anæsthetic. This pain gradually subsided. The paralysis reached its height at once, in one case affecting the right leg only, in the other both legs. Electrical changes were demonstrable in the paralyzed muscles.

Paræsthesia and other subjective sensory symptoms were complained of. Vasomotor changes, coldness, and blueness of the leg were marked in the first case but not in the second. In the first case there is, after nearly a year's treatment, a complete paralysis of the flexors of the ankle, while in the second case there is some return of power in all the movements, after sixteen weeks. That the nerves were injured on both sides of the pelvis in the second case may have been due to the fact that the forceps were reapplied several times and probably the position of the head was altered so as to cause pressure first



on one side and then on the other. The writer's explanation of the sharp limitation of the paralysis to the distribution of the external popliteal nerve as occurred in the first case is that the upper roots of the sacral plexus do not lie upon the pyriform muscle, but against the bony wall of the pelvis, and are thus exposed to pressure during difficult labors. It is the dorsal offsets of these roots which receive the chief injury, and from these dorsal offsets the external popliteal nerve is made up.

Other writers dissent from this pressure theory and ascribe lesions of the sacral plexus and its branches to a septic inflammation propagated directly to the nerve trunks from a metritis or a peri-uterine cellulitis.

Much confusion is due to classing together all cases of paralysis developing during the puerperal state under the general name of "puerperal paralysis" or "puerperal neuritis." Windscheit describes four classes:

1. Cases developing during pregnancy and persisting after confinement. There is a gradual weakening of the nerves of the extremities; the muscles atrophy and degenerate; trophic changes occur. No special limits to nerves affected. Etiology obscure but attributed to toxins.

2. Local neuritis due to puerperal infection, including also general pyemia in which all the nerves of the body may be affected.

3. Cases like the writer's, due to traumatism during labor.

4. Puerperal neuritis following normal labors. This may be localized, affecting only one or two nerves; or generalized, developing in many nerves and often of the ascending type. The prognosis is not good in either of these forms. The etiology is obscure. Anæmia following hæmorrhage has been considered a cause, or some unknown toxic agent, or even strong antiseptic douches.

The cause in the form under consideration in this paper is evidently undue pressure of the child's head. This pressure should be lessened in duration as much as possible by the use of chloroform and forceps in all cases where there is a disproportion between the child's head and the maternal pelvis.

*The Modern Cæsarian Section, an Ideal Method of Treatment for Placenta Prævia.*

A. PALMER DUDLEY (*New York Med. Jour.*, November 3, 1900) says that the time has arrived in obstetrics to do and dare more for

there is room for further advance. In placenta prævia not only the life of the child, but that of the mother, is placed in extreme peril without a moment's warning. It is quite possible to make a diagnosis of placenta prævia as early as the seventh month even if hæmorrhage has not occurred. Where placenta prævia exists the lower segment of the uterus will be spread out more than if it did not exist, the neck of the uterus will be less conical, while physical touch will indicate that dense tissue of more or less depth intervenes between the cervix and the child, while in normal conditions the presenting part can be easily outlined through the thin walls of the uterus. The placental bruit can be easily made out by digital touch, the whirl of the blood being transmitted to the finger. Moreover, the stethoscope will show absence of the placental bruit in the upper part of the uterus, unless possibly in a case of twins. In a case four and a half months' pregnant, where the attending physician had diagnosed fungous polypi in the uterus owing to repeated slight hæmorrhages, careful examination showed the case to be one of placental lateralis; the right lower segment of the uterus was abnormally developed and the whirl of the blood as it rushed through the enlarged uterine artery into the placenta could be distinctly heard. Where, owing to slight hæmorrhages, there is a suspicion of placenta prævia, careful examination should be at once made, and if the diagnosis is confirmed, the patient should be placed where she can be carefully watched, and when pregnancy is sufficiently advanced to render it probable that the child will live, Cæsarian section should be performed by the following methods: To minimize the danger of asphyxia to the child, the administration of gas and oxygen combined is best and is thoroughly efficacious. The operation should be performed under constant irrigation from a gentle stream of hot saline solution flowing from a position directly above the abdomen and out of the way of the operator. An incision, not over six inches long, from above the bladder to within two inches of the navel, will expose the uterus to good advantage. A piece of elastic tubing should be taken between the first and second fingers of the left hand, passed over the fundus, and well into the pelvic cavity; with the hand still in the pelvis each ovary and tube should be lifted up and the ligature guided beneath them, that they may escape injury from pressure. The ligature is drawn tight, half knotted, and given to an assistant, who sits between the patient's legs. Traction upon this ligature will control the ovarian and uterine arteries, keep the uterus pressed against the abdominal walls below, and prevent blood and amniotic fluid from entering the pelvis. A second assistant makes steady

pressure with his hand against the fundus at either side of the upper angle of the incision. The uterine incision is now made and the child grasped by any presenting part and extracted. With the traction of the ligature, the pressure of the assistant's hands, and the hot irrigation upon and with the uterus, the latter speedily contracts so that it can be lifted out through the small incision, and lie dependent over the pubic arch, where a sterilized towel is thrown about it. The placenta and membranes are removed. Three rows of continuous catgut suturing, done with a curved, non-cutting, round needle, are placed in the uterine wall, the outer row closing the outer layer of muscular structure and the peritonæal covering of the uterus. The ligature is now removed; slight oozing may be checked by packing hot sterile towels around the uterus. After the uterus is replaced the operation is completed as in any case of laparotomy. The dangers of sepsis, hæmorrhage, and shock are much less in such an operation than in the rapid manual dilatation, turning and forcible extraction of the child advocated by many, while the child's chances of life are vastly increased.

*Ethyl Bromide in Obstetrics and Gynæcology.*

WILMER KRUSEN (*Phila. Med. Jour.*, November 3, 1900) says that ethyl bromid (monobromethane) occurs as a clear, colorless, or almost colorless, volatile, not readily inflammable liquid of an agreeable odor. It must not be confounded with ethylene bromid (dibromethane,) a substance possessing dangerous properties. It should be purchased in the original hermetically sealed tubes containing one ounce avoirdupois. It must be kept in a cool, dark place, as it decomposes under the action of light and air. It is an ideal anæsthetic in cases in which brief anæsthesia is desired. The danger is no greater than with chloroform and but little greater than with ether. Its use in obstetrics is to relieve the severity of labor pains, not in cases where prolonged manipulation is required. A characteristic of this anæsthetic is the tendency for sensibility to pain to be lost before consciousness is entirely destroyed, thus enabling the patient to co-operate with the obstetrician without intense suffering. If properly administered it does not arrest the pains or cause uterine inertia or relaxation. It is administered by holding over the face of the patient a napkin on which a few drops have been poured. There is no choking or suffocation and an entire absence of any stage of excitement, while it is rarely productive of vomiting or any other sequels. In gynæcology it can

be used for bimanual examination to excellent advantage. For the opening of abscesses or sinuses a dram of the drug may be poured on a cone-shaped towel applied closely over the mouth and nose. Narcosis comes on in from thirty to forty seconds, and lasts from two to three minutes. As soon as unconsciousness is complete the mask may be removed. If care is exercised a second quantity may be administered but it is better to continue the narcosis with ether or chloroform if prolonged unconsciousness is desired. Dangerous lesions of the heart, lungs, or kidneys are strong contra-indications. Certain patients, especially alcoholics, resist the drug, and it should never be pushed.

#### *Treatment of Puerperal Eclampsia.*

J. B. KILLEBREW (*The Med. News*, November 3, 1900) says that the general characteristics of puerperal eclampsia resemble so closely those of other diseases known to be produced by a condition of toxæmia that this theory of its causation must be accepted until a better one can be found. While a patient with nephritis may be more liable to eclampsia, yet a woman with healthy kidneys may have eclampsia and one with diseased kidneys may escape it. In most cases of eclampsia the accumulation of the toxins is gradual, so that there are usually pronounced precursory symptoms, yet in a few cases the convulsions are the first symptoms observed. The rational line of treatment would be the sake of the child. Antiseptic surgery has made this possible, and be to arrest the formation of these toxins, but as it is not known just what they are or how or where formed, this line cannot be carried out. The best practical treatment is therefore to dilute the toxins circulating in the blood and also increase the activity of the excretory organs. The best means for accomplishing both these ends is normal salt solution. As soon as any of the well-known symptoms appear, whether the urine contain albumin or not, preventive treatment should be begun at once. A life free from excitement, moderate exercise, a liquid diet largely milk, the drinking of large quantities of water, and the administration of mild laxatives in just sufficient quantity to secure one large, loose movement each day should be advised. If the pulse is hard and tense nitroglycerine may be given. The skin must be kept active by a daily warm bath, after which the patient should be wrapped in a blanket and put to bed for an hour or two. But all these measures are secondary in importance to the use of normal salt solution given as high enemata once or twice in twenty-four hours. The



quantity given should be gauged by the retentive power of the patient, usually from 1 to 3 pints. The conscientious employment of this measure will often carry a woman to full term with safety to herself and the child. When convulsions occur inhalations of chloroform should be given and one of the superficial veins at the elbow should be opened and from 12 to 24 ounces of the dark toxin-laden blood should be allowed to escape from the distal end of the divided vein, while from two to three times that amount of normal salt solution at a temperature of  $100^{\circ}$  is injected into the proximal end. This plan should be carried out unless the patient is very anæmic, when it is better to introduce the salt solution without bleeding. The uterus should then be emptied immediately. Too many operators reverse this order, emptying the uterus first and giving the saline infusion later. If there are enough assistants the dilatation of the cervix and the saline injection can go on at the same time advantageously. After delivery the colon should be thoroughly irrigated; the recurrence of mild convulsions may be controlled with chloral given in an enema, if the convulsions increase in severity another infusion of salt solution should be given. During convalescence the excretory organs must be kept active, and the patient quiet and on a liquid diet for at least a week. A high saline enema should be given twice daily, and the patient kept free from depressing influences. Pilocarpin and morphine are too dangerous to be used in these cases.

*Smallpox in Fœtus aborted at the Fifth Month.*

C. W. RUMMEL (*Phila. Med. Jour.*, November 10, 1900) reports the case of a young married woman, pregnant for the first time, who, on the 30th of last June was taken with chills, headache, and lumbar pains accompanied by fever. No physician was called, as her family suspected smallpox, her father having just recovered from that disease. After the appearance of the eruption improvement began, and the woman was soon up and around. On July 21st she felt tired and began to have some pains, which gradually grew worse, until the child was born on July 25th. The fœtus, of about five-months' development, was covered with an eruption most marked on the face and chest. There were confluent lesions on the face and many of the vesicles showed distinct traces of umbilication. The day before the woman's pains began the health officer had fumigated the premises with formaldehyde, to which fact the family ascribed the abortion.

*A Contribution to the Therapeutics of Phlegmasia Alba Dolens.*

A. HERZFELD (*N. Y. Med. Jour.*, December 1, 1900) says that since the introduction of unguentum Credé a number of cases have been published in which this remedy has rendered good service in septic conditions, particularly in puerperal infections, but as far as can be ascertained no case of phlegmasia alba dolens treated in this manner has been described. The following case illustrates its value in this disease:

The patient was a primipara of twenty-seven, who had always been in good health. Her parents were living and well, but an aunt had died after the amputation of a "milk leg." After the patient had been in labor for twelve hours the pains ceased, but as the head was low in the pelvis a comparatively easy forceps delivery was made of an unusually large child. A moderate tear of the perinæum was sutured immediately. One of the stitches cut through, leaving a small ulcer. Contrary to advice, the patient rose on the twelfth day and resumed her household duties. On the twentieth day after delivery she had a severe chill and a temperature of 103.5° F. The left leg became swollen to double its normal size, the pain was intense. The lochia was diminished and scanty. Bichloride of mercury injections, 1 in 3000, twice daily, and sulphate of quinine, five grains every three hours, were ordered, and the whole leg was wrapped in a solution of lead and opium; at the end of a week acetate of aluminum was substituted for the lead and opium. High temperature with frequent chills continued for three weeks, when 225 grains of unguentum Credé were rubbed into the affected leg. This procedure was repeated on the following day, with the result that the temperature fell below normal, so that active stimulation was necessary. In this way 180 grammes were used in two weeks. There was rapid improvement, only a slight swelling remaining around the knee and ankle, which disappeared after the use of four more applications of 15 grammes each.

*Unusual Behavior of Cornual Placental Implantation.*

J. G. BOUVIER (*New Orleans Med. and Surg. Jour.*, December, 1900) reports an interesting and peculiar case of a woman of thirty-six, who had borne six children, who consulted him for profuse menstruation. The periods lasted from fifteen to twenty days and were accompanied by lumbar, sacral, and ovarian pains, urethral irritability,

constipation, mental depression and palpitation of the heart. During the few days between the periods there was a discharge of thick, greenish mucus, containing shreds of a whitish membrane. The cervix was enlarged and deeply lacerated. The body of the uterus was enlarged, tender, and almost immovably bound down in the pelvis. After two weeks' treatment by negative intra-uterine galvanism and faradism from a high-tension coil, the exudate had become absorbed and the uterus was free from tenderness and freely movable, but still enlarged and retroverted. The uterus was then thoroughly curetted and the cervix repaired by Emmet's method. The stitches were removed on the twelfth day, perfect union having taken place. Two weeks after the curettage menstruation began and was normal in every respect, but the pelvic pains reappeared afterwards, and examination showed the uterus bound down with plastic exudation. Galvanic and faradic applications, both intra-uterine and abdominal, were made three times a week. The exudate gradually disappeared, but the patient complained of pain and a pulling sensation in the left side, where there was found to be a small sausage-shaped enlargement. The applications were kept up for about a month, when the exudate had disappeared, but the pain in the left side persisted and the growth had increased in size. Pregnancy seemed to be out of the question on account of the thorough curettage performed two months before, the regularity of menstruation, the absence of all subjective symptoms, and the strict abstinence from intercourse since the operation. It seemed probable that there was a hydrosalpinx and an ovarian cyst. Four days after the last treatment the writer was hastily summoned and found that a miscarriage had occurred; the foetus was lying in the bed with the umbilical cord about five inches long severed. The woman in attendance said that the child had lived half an hour. The placenta had not come away. Introducing the hand into the uterus an opening was felt at the left cornu, which would admit two fingers; here was found attached a placenta measuring one by three inches, which was detached and removed with some difficulty. One hour after birth the foetal head measured two and a half inches in the occipito-frontal diameter; the chest, antero-posteriorly, measured two inches, and the body was eight inches in length. Twelve hours later attention was called to the remarkable change which had taken place in the foetal appearance. The flesh was firm, the bones of the head completely filled the scalp, the occipito-frontal diameter had become three and one-quarter inches, the expanding of the ribs brought the chest up to three

inches, and the body, fully extended as before, measured ten inches. From the hair on the scalp, the appearance of eyebrows and lashes, and the projecting of the free borders of the nails it was decided that the fœtus represented a six months' pregnancy. The mother made a good recovery and her subsequent health has been excellent.

#### GREAT BRITAIN.

##### *A Case of Presentation of the Head, Cord and Foot: Contracted Pelvis; Cæsarian Section.*

W. ALEXANDER (*The Lancet*, October 27, 1900) reports the case of a woman who was admitted to the Liverpool Hospital after having been three days in labor. The pains still continued but were feeble, and the woman was greatly exhausted. Examination showed the os fully dilated, the membranes ruptured, with all the liquor amnii drained away. The head, with one foot beside it, presented, and the cord was prolapsed and pulseless. The bony pelvis of the patient was contracted in all diameters and the vagina was also contracted. After the administration of chloroform a short attempt at turning the child was made, but proved futile. Cæsarian section was performed and a dead child extracted. In spite of the woman's exhausted condition she rallied well from the operation and made a good recovery complicated only by a stitch abscess.

##### *Have Maternal Impressions Any Effect upon the Fœtus in Utero?*

WILLIAM DUNCAN (*Ibid.*, November 3, 1900) says that those who deny the influence of maternal impressions say (1) that deformities are rare but maternal impressions are common; (2) that deformities occur with no history of maternal impression; and (3) that as there is no nerve tissue in the umbilical cord impressions cannot be conveyed from the mother to the child. On the other hand, there are many who are unable in the face of many well-authenticated instances, to refuse to believe that maternal impressions and fœtal deformities sometimes stand in the relation of cause and effect, even if the *modus operandi* cannot be explained. The wife of a medical man, when seven-weeks' pregnant, was photographed with her husband. His right hand was closed, as it hung by his side, so that only the thumb and little finger hung down, giving the impression, in the picture, of a hand with three fingers missing. The wife was greatly annoyed and spoke about the picture frequently to friends, calling atten-



tion to the apparent deformity. When the child was born, after a normal labor, the right hand presented a similar deformity. The nurse in charge showed the deformed hand to a neighbor who was a few weeks' pregnant. She was of a very nervous temperament, and seemed much shocked and expressed the idea that a similar deformity in both hands would be an unbearable calamity. Her first child was born at full term with *both* hands and feet similarly deformed. She expressed to the writer her firm conviction that it was the sight of the other child which had caused this result. Both of the children were healthy, with no abnormalities in either family.

*A Case of Tolerance of Abdominal Section in Two Different Pregnancies.*

FREDERICK EDGE (*British Med. Jour.*, November 17, 1900) performed a laparotomy three years ago on a woman four months' pregnant with an ovarian cyst the size of a child's head. The tumor was removed and the incision closed with silkworm gut, including all layers in the sutures. Recovery was uninterrupted and delivery at term normal. A short time ago she presented herself at the hospital with a hernia of the scar and three months' pregnant. Remembering her tolerance of the other operation it was decided to operate for the hernia at once. The abdomen was opened and the parietes were re-sutured in layers with catgut and the skin closed with silkworm gut. There was primary union and the woman left the hospital in excellent condition, with the pregnancy in no way disturbed.

---

ITEM OF INTEREST.

DR. THOMAS ADDIS EMMET.

Three months ago Dr. Thomas Addis Emmet resigned from The Woman's Hospital, where he had held the post of Senior Attending Surgeon for forty-six years. With Dr. Emmet's resignation was severed also the connection with this Institution of Dr. John Duncan Emmet who had been Assistant Surgeon for sixteen years. At the official solicitation of the Board of Governors, however, he remained in charge of his father's service for three months or till January 17th of this year. He has recently been appointed Visiting Gynæcologist to St. Vincent's Hospital in this City.

THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

FEBRUARY, 1901.

CAN INTERSTITIAL KERATITIS BE PREVENTED IN THE  
OFFSPRING OF SYPHILITICS.

BY PETER A. CALLAN, M.D., NEW YORK CITY.

It is not the object of this paper to discuss the causes of internal keratitis, it is assumed that the majority of the cases are due to inherited syphilis. Occasionally we see a case due to acquired syphilis, but this form is quite rare. My personal experience leads me to regard all causes other than syphilis as exceptional. In regard to syphilitic parents, it is not easy to prove the existence of the disease after the lapse of years; in fact, if they see fit to deny it, we cannot arrive at a decision otherwise than by the history, which at the best is not satisfactory in many cases.

If we question the mother as to dead-born children and miscarriages, we frequently get valuable hints as to the infection.

If marriage is contracted years after contracting syphilis, the offspring may show no evidences of the inherited taint. The majority show but little to differentiate them from children in the same social strata. If we expect to always find the undeveloped physique, the pronounced facial type, with bulging frontal prominence, flat nasal bridge, fine lineal scars about angles of mouth and *Hutchinson's* test, we are doomed to disappointment. We should examine further as to inflammation of lachrymal ducts, ozenia, impairment of hearing, cicatrices of mouth and pharynx, for nodes on tibia—serous expressions of knee-joints, and hard indurated glands in the first cervical region.

---

\* Read before the Medical Society of the State of New York, Albany, N. Y., January 29, 1901.

The typical cases form but a small percentage: we may find some of the characteristic signs in many cases, but rarely do we meet with all in a single case. I have found Hutchinson's teeth more frequently than any of the other diagnostic signs. The peculiar feature of these teeth is the peg-shape of the upper incisors of the permanent set. I am sure if we follow the teachings of this text-book, and look for deformed, short, notched teeth, we will be misled, as this latter type is rather the exception than otherwise. The teeth may be perfect in all other respects—except the peg-shape. We must admit that in very many instances we encounter great difficulty in demonstrating the presence of inherited syphilis: however, an examination of the other children of the same family is often of great assistance in arriving at a correct diagnosis. Interstitial keratitis occurs during the growing period. I have met with cases as early as the fourth year and as late as the twenty-eighth year.

In reviewing my records I found most cases between the eighth and twelfth years, and next in order of frequency between the seventeenth and twenty-first years. In the general run of cases the interval between the involvement of both eyes does not exceed one month.

I have observed a few cases where the interval extended over a period of years. In one instance sixteen years, in another eight years, and a third case five years elapsed before the second eye became inflamed, but these cases are very exceptional. Rarely does an interval of a year intervene before the fellow eye becomes affected. In acquired syphilis we see occasionally an attack of interstitial keratitis, which, as a rule, is confined to one eye, but these cases are quite rare, and it may not be wise to draw hard and fast conclusions from them. The following case is of considerable interest, to show how much can be accomplished in warding off the development of interstitial keratitis when the inherited taint was quite manifest:

Miss A., 19 years of age, and an only child. Father syphilitic. During the past ten years this young patient has been under observation, on account of retinal changes in one eye. During 1899 and part of 1900 she was under close observation and treatment, taking tonics and anti-syphilitics. After fifteen months' treatment interstitial keratitis developed in one eye, to be followed within three weeks by the disease in the fellow eye. The attacks in both eyes were unusually severe, leaving dense opacities in the lower third of each cornea. In this case the general physical development was about the average, and the only characteristic sign of the inherited taint was the peg shape of the upper incisors, which are small and widely separated. In this

case the previous treatment may have defined the outbreak, but it certainly did not prevent nor modify its severity. The following family history is given to show one might be deceived as to ætiology:

Mr. D.'s family consists of four children—two boys and two girls. In 1883 the third child, a son, had interstitial keratitis, when six years old. His face was typical of the inherited taint. In June, 1894, the oldest child, a young lady of 23 years, had interstitial keratitis. She was very well developed, but had no other sign of the taint except a slight peg shape of the upper incisors.

In the same year, 1894, the youngest child, a daughter aged 16 years, had interstitial keratitis. In this case there was absolutely nothing to indicate the inherited taint. In fact, she was above the general average as to physical health and beauty.

The only one of the four children to escape interstitial keratitis is the second child, now a young man of 28 years of age, who has nothing whatever to show in regard to inherited syphilis. The two daughters had unusually severe attacks, leaving opaque cornea and posterior synechia, with very poor vision.

The first to be attacked was the boy, the third born, and the only typical case of inherited syphilis. Next the oldest, a daughter, who did have peg-shaped, Hutchinson teeth; then the youngest of the four children, likewise a daughter, who shows no evidences of inherited syphilis other than the eye inflammation. Only one of the four children escaped the disease. Supposing that the youngest child was the only one to have had interstitial keratitis, it would have been impossible to definitely say what was the cause; further, the oldest child had only peg-shaped teeth to indicate the inheritance. However, by taking the family of children as a whole, it is not necessary to ask any questions of the parents; the facts are too apparent, and they speak for themselves.

*Conclusions:* The offspring of syphilitics show the evidences of the inherited taint in only a slight percentage of the cases; that is, if we except those children that die under five years of age.

Only a slight percentage of such children develop interstitial keratitis.

When the disease attacks one eye, all our treatment appears to be powerless to prevent its development in the fellow eye. We may possibly delay, but we cannot prevent, the outbreak of interstitial keratitis in certain cases.

35 West 38th Street.



## TWO INTERESTING CASES.\*

BY CHARLES P. NOBLE, M.D., PHILADELPHIA, PA.

I.—*Multiple Sinuses in the Perinæum resulting from Infection and the Failure to remove Sutures.*

I operated to-day upon a case which shows that even a perinæal operation may be followed by very annoying sequelæ. This patient was operated upon in a hospital in an adjoining town, in June last, for procidentia. The operation consisted of amputation of the cervix, resection of the anterior vaginal wall, perinæorrhaphy and hysterorrhaphy. The perinæal wound became infected, and the swelling and soreness due to this probably account for the fact that in removing the sutures from the perinæum one was overlooked, and at least four were cut so that the knot was removed but the loop left in the perinæum. The perinæum continued to be inflamed, and from time to time pus was discharged from one or more openings. In December she consulted me, about six months after the operation. I was able to remove one suture and to fish out a piece of suture from one of the sinuses. The parts were too sore for further exploration. She was admitted to the hospital, and after the use of hot packs to reduce the soreness a more careful examination was made. It was then found that the perinæum was riddled with sinuses, so that it was opened from just in front of the anus to at least an inch and a half within the plane of the hymen. Several loops of stitches were found in the sinuses. Two weeks later what appeared to be an ischio-rectal abscess made its appearance. The patient stated that she had had such an inflammation following the operation, which was relieved by a discharge of pus into the vagina. On cutting into the abscess a loop of suture was found, which had migrated at least two inches from its point of insertion. The abscess communicated by a sinus with the perinæum.

Presumably all of the sutures are now removed, and healing may be expected.

The case is reported as illustrating the great amount of suffering

\* Read before the Philadelphia Obstetrical Society, January 3, 1901.

which may be entailed by infection of a perinæal wound, and also to show the necessity for extreme care in the removal of sutures. Had the perinæum not become infected, in all probability nothing worse than superficial sinuses would have resulted from the suture material left in the perinæum, and this would probably have worked its way out spontaneously, but the combination was too severe for nature's powers at elimination.

II.—*Pelvic Abscess resulting from Attempted Abortion in an Unimpregnated Woman.*

I operated upon a case to-day that was unusual. We all of us have very frequently operated for pelvic abscesses, as the result of criminal abortion, but I have never operated when a patient tried to commit an abortion when she was not pregnant, but I had such a case to-day. A young woman who supposed herself pregnant went to one of our instrument shops and bought a uterine syringe. (I was not aware that the instrument shops sold uterine syringes to the lay public.) She injected water into the uterus. There was no reason to believe that she injected this fluid into her tubes, as she didn't have any marked pain or collapse at the time. She was miserable after this experience. I think she had a moderate infection and moderate peritonitis, but she kept at her work. As her monthly sickness was not satisfactory to her, the next time it came on she again injected a syringe full of water into her uterus, and became quite sick. About a week after this experience she called in the family physician, who found she had a temperature of  $104^{\circ}$  and a rapid pulse. Then I was consulted. At that time the uterus was quite movable, and there was nothing to be felt in the right side of the pelvis, but there was a distinct abscess in the left side, so about two weeks ago I incised that abscess and drained it. The patient did quite well for some time, and then had a recurrence of her symptoms, extension of the peritonitis and another abscess, and to-day I opened this in the right side of the pelvis.

---

## A CASE OF PSEUDO-ILEUS, FOLLOWING INSTRUMENTAL DELIVERY AND ADHERENT PLACENTA.

BY JOSEPH M. RECTOR, M.D., JERSEY CITY, N. J..

Gynaecologist in Charge, Jersey City Hospital; Visiting Physician to Emergency Hospital.

K. B., aged 29 years, II. para, family history negative, menstrual history good.

On the evening of July 1, 1898, I was called, as consultant, to assist in the delivery of her first child. She had been in labor for four days, during which period her uterine contractions were alternately light or severe; her general system had withstood the heavy strain thus placed upon it, and at the time of my visit I found her in a comparatively good condition.

The membranes had ruptured during the afternoon; the cervical canal was but partially obliterated, the external os uteri admitted two fingers, while the presenting head had failed to engage the pelvic inlet.

Chloroform was administered, the cervical canal fully dilated, high forceps applied, and the patient delivered of a living child.

On the evening of December 4, 1900, I was again called to her bedside to find her in labor for the second time. She had been ill for three days, her pains during the time being but slight and occurring apart at long intervals. At 6 o'clock on the morning of the date above mentioned, the uterine contractions became frequent and severe, and continued during the entire day. Examination showed the cervical canal and os uteri about the same as described in her first labor, the membranes were bulging through the os, and the head was presenting in the second position.

I waited one hour and finding no progress, anæsthetized the patient, ruptured the membranes, fully dilated the canal, applied axis traction forceps, and at 12:30 A.M. delivered the woman of her second child. The placenta was adherent over its entirety and necessitated its removal by curette.

At 3 o'clock I was hastily summoned and found the woman in a state of collapse; the radial pulse was rapid and barely perceptible, the skin cold and clammy, while the respirations were rapid and shallow. The abdomen was markedly distended with gas, percussion

giving a sharp tympanitic note. Examination for post-partum hæmorrhage was negative.

Heart stimulants were freely given hypodermatically, a high rectal enæma of hot normal saline solution was used, turpentine stupes and hot fomentations applied to entire abdomen. A small amount of flatus was constantly passing by the mouth.  $\text{̄}3\text{i}$  Rochelle salts dissolved in  $\text{̄}3\text{iiij}$  of water, to which  $\text{̄}3\text{ij}$  of whiskey was added, was given per ore. The abdomen continued to increase in size until 11 o'clock in the morning, when the bowels freely moved.

From this time on the flatus was constantly passing by mouth and rectum; the patient slowly improved until the evening of the next day, December 6, 1900, when she was in a satisfactory convalescent condition.

During her dangerous interval, from 3 o'clock in the morning of December 5th. to the morning of December 6th, the patient was given  $\frac{1}{30}$  gr. strychnia,  $\frac{1}{100}$  gr. nitroglycerin, and  $\text{̄}3\text{ss}$  whiskey every three hours; hot fomentations applied to the abdomen every hour; one quart hot normal saline enæma every two hours;  $\text{̄}3\text{i}$  Rochelle salts dissolved in  $\text{̄}3\text{i}$  water every half hour for six doses.

Her after-treatment was simply supportive and stimulating.

---

## THE RELATION OF APPENDICITIS TO DISEASES OF THE UTERINE APPENDAGES.\*

BY ALBERT L. BEAHAN, M.D., CANANDAIGUA, N. Y.

The occurrence of right side pelvic disease where the question arises as to the diagnosis between disease of the appendix or appendages in the female is frequent and sometimes requires fine discrimination. Gross changes in the appendages resulting from disease, co-existing with appendicitis, are not uncommon. There has not been shown to be any direct relation, except those of proximity. Functional disease of the appendages with disturbance of normal action in production of menstruation may be demonstrated to exist, not as a coincidence, but as a certain law of cause and effect.

Recently each of four young unmarried women from 17 to 23

\* Read before the Medical Society of the State of New York, at Albany, N. Y., January 29, 1901.



years of age, in the hospital at the same time for appendicitis, having marked menstrual disturbances, aroused my attention to a possible relation between these conditions. The operation for removal of the appendices were each supplemented by an examination of the right ovary at the time of operation and in three of the cases by previous vaginal and abdominal palpation without finding tube or ovarian disease, so that any menstrual irregularity or disturbance was proven to have been functional or reflex, rather than organic. The salient features of these cases only will be given in corroboration of the position to be established.

*Case I.*—Patient aged 21. Menses always regular and painful, requiring one day of each period to be passed in bed. Had in May, 1900, what seemed to be an attack of pelvic peritonitis. Right side swollen, much gas in bowels, obstinate constipation, pain in right side when wheeling or riding horseback for several years last past. Palpation gave swollen region about right appendage, which free catharsis dissipated. Operation disclosed head of cæcum low down, with appendix flexed and folded back of cæcum. Base of appendix a cuspidore of septic infection; colon studded with patechial spots, showing that on its internal surface it was covered with congested areas.

A prognosis of ileocolitis was made at time of operation, and true to prophecy, the characteristic green stools, gaseous distension of bowels and nervous phenomena developed during the next six weeks, but convalescence was otherwise satisfactory and recovery good as could be expected.

*Case II.*—Aged 19. Ill since a child. Constipation and gas discomforts: pain in right side, since she can remember, on moderate physical exertions. Menstruation always painful and very irregular. Six weeks prior had severe attack of appendical local peritonitis at menstrual epoch. An operation disclosed an anomaly of appendix. The appendix free at base and apex flexed back of cæcum and passing for three-fourths of an inch between the coats of the cæcum, then out, leaving apex free. A permanent stricture had formed in this, three-fourths of an inch distance. The apex was gangrenous: several sutures were required in muscular coat of cæcum to restore the parts from which the appendix was dissected out. Recovered. Menses since painless and regular.

*Case III.*—Aged 19. Nurse in hospital; under observation one year. At sick time had to go to bed three or four days: vomited much, always suffered great pain in back and pelvis, and anterior part of

thighs; much gas in bowels. Grape seeds found in appendix and large phlegmonous swelling in contiguous omentum that promised certain and speedy abscess formation. Temperature of  $99\frac{1}{5}^{\circ}$  to  $100\frac{1}{5}^{\circ}$  F., with a swollen appendix, was present at menstrual period. Recovered.

*Case IV.*—Aged 17. Had not menstruated in four months. Had had three attacks of appendicitis during past seven months. Appendix very large and filled with pus. Patient had been very nervous and had painful menses. Recovery with return of menstruation shortly after leaving hospital and it was painless.

Looking over case records I find it to be the fact that these cases are not exceptions, but the contrary. Given a condition of locked colon, constipation and gas accumulations, an exaggeration of menstrual phenomena, increased pallor, languor, pains, nausea, or vomiting; more pronounced nervous irritability, peevishness, fretfulness, a general appearance of illness, then a suspicion of diseased appendix should be held. The appendiceal storm struck the profession in a startling way. At first males had the prestige. The general surgeon was called to the work. The females were allowed a chance to have peritonitis because of appendage disease. Now each sex has equal rights to the disease.

The gynæcologist may study with profit the relation of appendicitis to his patient's diseases. Often the appendix has been found to be attached to the ovary and one or both disorganized. A limited experience will show that fact. I have a case in mind. Menstrual flow always excessive and pain very great. Menses so irregular that they were sometimes absent for months. Appendix, at point of contact and adherence, had a gangrenous inclusion; ovaries fibrous and cystic. Such gross lesions, with their histories, pave the way for our belief that the functional interdependence is proven. History of our own cases shows profound impressions where chronic appendicitis exists in the female prior to operation. At least four cases have been under daily or semi-weekly observation for one to five years. Anæmia, loss of flesh, sometimes jaundice, is present. Often fæcal poisoning from torpor of colon has been associated.

In the cases most closely observed a mean temperature of  $99\frac{1}{5}^{\circ}$  to  $100\frac{1}{5}^{\circ}$  F. was found for several days during the menses, with a tender, swollen appendix. This seemed to clinch the diagnosis as being appendicitis. The majority of cases have occurred in the unmarried, or in the married women who have not borne children. Why should appendicitis cause menstrual disturbances? Does this inflamed ab-

dominal tonsil produce similar profound systemic disturbances as does its throat prototype? Is the cause to be attributed to the influence of torpor or paresis of bowel from the usual involvement of the peritonæal coat of the head of the cæcum? In severe chronic appendicitis this seems probable. In milder cases, where adhesion or pus pockets are not found, a reddened splotch will be seen extending from the appendix upward to the head of the cæcum. The proneness of the female to colon and rectal accumulations with less discomfort than when this occurs in the male, is in evidence. Freeing the colon and lower bowel with cathartics especially directed to them, as with aloes, has always been an efficient method of obtaining an emmenagogue action of medicines. Reasoning from effect to cause, it may properly be argued that the full bowel induced by appendical disease causes the menstrual irregularity. If so, constipation, gas formation from indigestion, stasis of food changes, auto-infection in bowel, nausea or vomiting, pallor, sallowness of skin, or a muddy complexion, loss of flesh, repeated sharp impressions of these attacks on the nervous system, with slight febrile attacks maintained for several days, make features that should be apprehended and correctly interpreted. In this discrimination as to the diagnosis of appendicitis in the female, it is necessary to exclude right tube and ovary disease by familiar methods. The removal of an appendix is never to be regretted when diseased. As its removal in this class of cases may be expected to correct the train of miseries associated with functional menstrual disorders it should be done earlier than probably any other form of appendicitis. It seems to be borne out by the cases observed that the nervous symptoms of appendicitis in the female are out of proportion to the cause as measured by the same class of cases in the male, and to be as much or more pronounced than the nervous manifestations of inflammation and abscess of the Fallopian tubes. This probably is because in appendix inflammation the organ hangs suspended in the abdominal cavity and is affected by muscular and postural acts, while in the inflammation of the tube it is steadied more by its anatomical relations, and adhesions are a more frequent occurrence. And in diseases of the appendages, though menstrual pains are often severe, menstrual irregularities are not especially prominent. To recapitulate: A febrile disturbance during menstruation, with a swollen, tender appendix, obstinate constipation and gas-formation in bowel; painful, retarded menses, pain in lower segment of abdomen, especially in right side; loss of flesh, pallor, or muddy complexion, peculiar nervous symptoms, as irritability and exhaustion occurring in a more

exaggerated form than is peculiar to the individual, make the probability of a diseased appendix very certain and its speedy removal imperative.

18 Gorham street.

## CHOLÆMIA AND HÆMORRHAGE.\*

BY D. TODD GILLIAM, M.D., COLUMBUS, OHIO,

Professor of Gynæcology Starling Medical College, Gynæcologist to St. Anthony's and St. Francis' Hospitals.

*Relation of Cholæmia and Hæmorrhage.*—The prevailing belief, founded on the teachings of text-books and voiced in current medical literature, that cholæmia tends to diminish the plasticity of the blood and leads to intractable and oftentimes uncontrollable hæmorrhage demands, as I believe, reconsideration. In the hæmatogenous form of jaundice, due to some occult metabolic blood change, there undoubtedly exists a diminished plasticity of the blood. But these are not the cases with which the surgeon has to deal, nor are they the cases in which we find the intense and persistent jaundice which the surgeon dreads. While there may be, and probably is, a modicum of truth with reference to the hæmorrhagic tendency in hepatogenous jaundice, I am persuaded that the effect of cholæmia on the blood plasticity is greatly overestimated, and that we must seek elsewhere for an explanation of the disastrous consequences attending operations on such subjects. It has been my fortune to operate on quite a number of cases of deep and persistent jaundice, in some of which I have opened the gall-bladder and in others have left this viscus undisturbed. In no case in which the gall-bladder was not interfered with have I had any trouble from hæmorrhage. These latter include some of the worst cases of cholæmia that I have ever encountered. Having met with a series of such cases in the earlier history of my experience in abdominal surgery, I began to mistrust the relationship between cholæmia and hæmorrhage. Suddenly I had my newly formed conceptions rudely shaken by a death from hæmorrhage, after cholecystectomy in a cholæmic patient.

Conceiving the hæmorrhage to come from the line of incision in the abdominal wall, and after vainly trying styptics and local com-

\* Read before the Section of Obstetrics, Pan-American Medical Congress in Havana, Cuba. February 4, 1901.



pression, I opened up the wound down to the peritonæum, separated the surfaces widely, applied the thermocautery to the entire surface and, packing tightly with gauze, closed the wound over it by the interrupted silkworm-gut sutures that had been introduced as usual for the closure of the abdominal wound. In doing this I had hermetically sealed the opening to the gall-bladder. As there was no consequent external hæmorrhage, I was congratulating myself on a successful issue when, thirty hours after, the patient gave evidence of collapse, ejected a large quantity of blood from the stomach and died. I was at that time in doubt whether the blood came from the stomach or the biliary tract. In another and recent case I could determine with certainty that the hæmorrhage proceeded from the gall-bladder, and in this case I removed the drainage tube and with a Darmack gauze packer filled the gall-bladder with gauze. This gauze was in one long strip and had been soaked in a saturated solution of alum. During the subsequent forty-eight hours, despite this packing, there was a considerable discharge of blood externally, which, however, ceased and was replaced with bile.

*Expulsive Power of the Gall-bladder.*—On the third day after the packing, notwithstanding that a compress of alum-soaked gauze was placed over the outlet and secured by an abdominal binder, the gall-bladder packing was expelled and found lying over the mouth of the opening. This (though not directly pertinent to the question under consideration) gave me an idea of the wonderful contractile and expulsive power of the gall-bladder. It also explains the facility with which calculi even of large size may be expelled spontaneously when not removed at the time of operation.

This should teach us, I think, that prolonged and violent effort to remove calculi in a weak and failing subject is scarcely justifiable. This applies especially to the calculi lodged in the cystic duct when not impacted. Recent experience illustrates this phase of the question. The patient was a delicate, fine strung woman, who had been bedfast for three months and had long been suffering from cholangitis and gall-stones, with daily chills, fever and sweating, until her condition became alarming. I removed several dozen gall-stones from the gall-bladder, but finding difficulty in dislodging three from the duct, concluded to leave them. In the course of a week these calculi were extruded and removed with the dressings. In case of impacted gall-stone I think it better to remove them at the time of operation, even at very considerable risk.

*Source of Hæmorrhage.*—If it can be shown that the hæmorrhage

of cholæmia is not diathetic; that it proceeds from local conditions and causes, then we shall have made a decided step in advance and brought ourselves much nearer to a rational therapeutics. That the blood is not devoid of coagulating properties is manifest in the clots which form after its discharge. True, the clotting is neither so firm nor so general as under normal conditions, but this may be, and probably is, due to some modifying property of the structures or secretions with which it comes in contact, as will appear later. Another fact which I have observed, without exception, is that the hæmorrhage does not occur for some hours or even days after the operation. On this feature I shall not venture an opinion, nevertheless it is significant as indicating no marked change in the plasticity of the blood, else we should have hæmorrhage from the beginning. In view, therefore, of the fact that the hæmorrhage of cholæmia does not occur where the gall-bladder is not opened, and that it does not proceed from the abdominal incision where this viscus is opened, that the blood is coagulable, and that it is easily staunched during, and seldom gives trouble until many hours after, the operation, I am persuaded that the hæmorrhage of cholæmia is not so much due to a blood change *per se* as to a structural change in the mucosa of the gall-bladder, usually associated with cholangitis. The absence of coagulability, if indeed there be such, may be explained by some such influence of the tissues or secretions as obtains in the uterine cavity, due to the lymphoid elements.

*Treatment.*—Taking into consideration, therefore, the purely topical character of the hæmorrhage and bearing in mind the excellent results from treatment addressed to the source of hæmorrhage, as in packing the gall-bladder, were I to have another case I should pursue a more radical course—a course based upon the analogy of gall-bladder hæmorrhage and that of other hollow organs, notably the uterus. After emptying the gall-bladder, irrigating and drying its interior, I would swab it out with strong carbolic acid, as nearly pure as it can be made to retain its liquid state at ordinary temperature. The swab should not be so charged as to allow dripping or running of the acid, as free acid in the gall-bladder might find its way into the intestinal tract. The entire surface should be gone over methodically, and this should be followed by a gauze pack. The gauze, which should consist of one long strip an inch or more in width, should be introduced with care and precision, so as to equibly and quite fully distend the organ. Over this place a compress and snug bandage. The objection might be raised that as the gall-bladder mucosa is so prone to necrosis it would be dangerous to use an escharotic of such potency as carbolic

acid. I confess that I should fear to use a milder solution of carbolic acid, on account of its known tendency to produce necrosis, but here I should expect the best results, not only as an hæmostatic, but also as a germicide. I should have no fear of systemic intoxication from absorption, because of the immediate and powerful escharotic effect, which not only blocks absorption, but produces a non-poisonous, organic combination. Curettage of the gall-bladder may be found to be a valuable adjunct, or rather precursor of the foregoing treatment, but I should hesitate to resort to it, because of the pliability and vulnerability of the organ. It would also be time-consuming, which is often a matter of much moment in the class of cases under consideration. Where, through considerations of expediency, the carbolic acid was not used I should instill into the gall-bladder a liberal quantity of hydrogen dioxide, not only as a germicide, but as a powerful hæmostatic as well, and would expect results second only to those derived from the use of the carbolic acid.

---

#### SEVENTEEN YEARS OF CONGENITAL NOCTURNAL INCONTINENCE OF URINE CURED BY OPERATION.\*

BY GEORGE H. NOBLE, M.D., ATLANTA, GA.

The rarity and intractability of congenital incontinence of urine of long standing make this case interesting. The subject of this report is an overgrown girl, seventeen years of age, who continued the habit of wetting the bed all her life.

In the daytime she had sufficient control over the bladder to enable her to reach a fit or proper place for urination.

Careful examination failed to disclose any physical defect of the urinary apparatus. The urine was normal in every respect; neither were there rectal irritation nor constipation to which a reflex could be ascribed.

She was not a person of neurotic temperament, being phlegmatic and sluggish. As medical treatment had utterly failed, she entered my infirmary September 26, 1898, where a cystoscopic examination was made with the electric light, while the patient was under the influence of chloroform, without finding even as much as a simple hyperæmia of

\*Read before the Southern Surgical and Gynæcological Association, 1899.

the mucous membrane of the trigonum. An injection of sterile milk was used in search for a congenital fissure or fistula, but in vain.

A close inspection failed to disclose a supernumerary ureter, or one with an opening abnormally placed.

Failing to find any malformations, it seemed probable that it was due to a local condition acting as an exciting cause. My attention was, therefore, directed to an inflamed and thickened hymen, which was an-

FIG. 1.

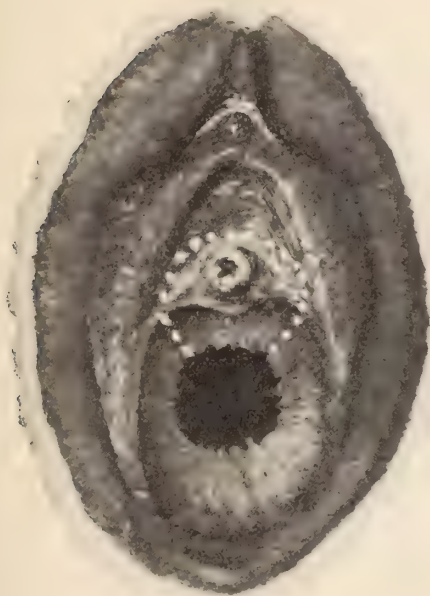
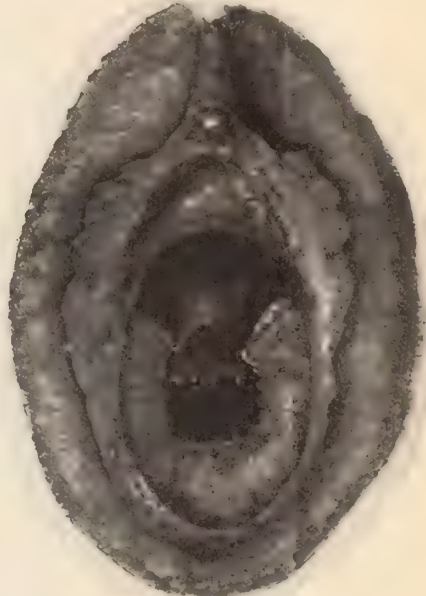


FIG. 2.



nular in shape and infiltrated until it was three-eighths of an inch at its base or outer margin, and, having very intimate connection with the meatus, it occurred to me that it was the source of the trouble.

It was her habit to sleep on her face, which doubtless contributed to an accumulation of bodily heat about the external genitalia, resulting in stimulation of the sensitive and irritable hymen, which, becoming more or less erectile, irritated the meatus; this in turn stimulated the circular muscles at the neck of the bladder and trigonum, resulting in involuntary micturition.

Acting upon this idea, September 28, 1898, I cut through the hymen

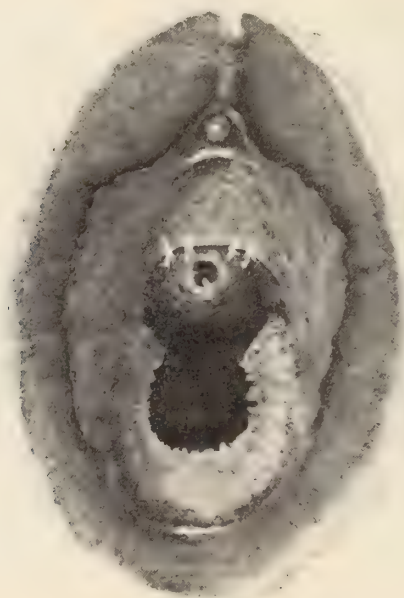


on either side of the meatus, and dissected the urethra free from its attachments for half its length. (See dotted line, Fig. 1.)

At this stage of the operation the urethra was hanging from the pubic arch like a pendant (see Fig. 2), with a portion of the hymen attached to the under surface, and each side of it close to the meatus.

Separation of the urethra from its attachments severed all nerve connection with the meatus, cutting off all possible reflexes from the inflamed hymen. The next step in the operation consisted in passing

FIG. 3.



two sutures through the attached portion of the hymen, on either side, and fastening them to the pubic arch, making a sling or support to the urethra. (See Fig. 3.)

This being in the nature of an experiment, I made use of a little moral treatment. It consisted in having her awakened the first night every two hours to void the urine; the second night, every three hours; the third night, every four hours, and so on until she passed the entire night without evacuating the bladder. She was impressed with the belief that the operation must necessarily relieve her, consequently no

chances of involuntary urination could be taken. The progress of the case was exceedingly gratifying; no accidental passage of urine or unpleasantness whatever occurred. At no time since the operation has she experienced any discomfort from her former trouble, but has remained perfectly well.

---

## THE CURE OF COMPLETE PROLAPSUS UTERI BY PLASTIC SURGERY.\*

BY JOHN DUNCAN EMMET, M.D., NEW YORK, N. Y.,  
Visiting Gynæcologist to St. Vincent's Hospital.

Although the subject matter of this paper is more or less familiar to most of you—and I confess that I have very little to say about it which has not already been said by the author of the plastic operations which I am about to describe—in a word, although the operations themselves were brought to perfection and have been in use many years, I find from personal observation that, even among practical gynæcologists, there is often found a want of cohesiveness and clearness of thought in regard to the basic principles of plastic surgery and of the indications to be met. Knowledge and ability in technique are also frequently conspicuously absent but these qualities are of secondary importance in the case of one who does not know what he should do nor why he should do it.

That this condition of things should exist is not very surprising because plastic surgery, although a branch of general surgery, is so distinct from the latter in its principles, in its aims and in its technique that it is almost a science and art *sui generis*. So true is this that it has been said—and I believe with truth—that no man can be an abdominal surgeon and a plastic surgeon and equally excel in both. So distinct are the methods and so opposed are the objects, in practice, therefore, of general surgery and of plastic surgery that I scarcely think it any exaggeration to say that medical gynæcology and plastic work, always inseparable, should, strictly speaking, alone be considered to form the *specialty* of gynæcology. For, abdominal surgery among us is but the application of general surgical principles and technique to women, and this only; a fact, the general appreciation of which is

---

\* Read by invitation before the Brooklyn Gynæcological Society, February 1, 1901.

manifested by the invasion of our domain, to our cost, by the general surgeon.

While there are many gynæcologists and others who "do" plastic work when it comes their way, there are not many plastic surgeons. Besides special knowledge of principles and technique which, to be thorough, require long and special training in the getting, the plastic surgeon must have an acquired and often an instinctive knowledge of the laws of mechanics; for this is what plastic surgery is above all things. It is, therefore, as nearly an exact science and the indications of the diseased conditions treated by it must be as exactly fulfilled, mechanically, in the operations performed, as the human eye and human dexterity can manage it. Unless these conditions are fulfilled, we do not cure; if they are thus fulfilled, our results are always uniform and always perfect. In other words, given a certain diseased condition and given a plastic operation which exactly meets its indications—an operation, for example, which has proved itself in the hands of other men—if an operator fail with such an operation under such conditions, the fault lies with him and not with the operation. This is certainly a self-evident proposition and yet the very operations which I am about to describe have been frequently maligned and discarded for the sole reason that they have not always been successful—not in the hands of their originator and many of his followers but—in the hands of all who have attempted them.

It is very human to place the blame for our own faults upon the "contrariety of inanimate things" and to console ourselves with the self-imposed conviction that, when we have performed an operation as well as we happen to know how, the responsibility for failure, at least, should not be placed upon us. The patient *should* be cured, whether she actually be or not.

A rather good story is ascribed to the late Dr. Skene in this connection. Some years ago a woman came to him from New York for relief of incontinence of fæces. After examination Dr. Skene informed her that she had laceration of the sphincter ani. With great indignation she informed him that that was impossible because Dr. Blank, a very eminent gynæcologist of New York, had operated upon her for that condition and had cured her. Dr. Skene, who was not wanting in a sense of humor, as we all know, then asked her for what symptoms she had sought an operation. She replied: For incontinence of fæces. Was this condition improved by the operation? No, she had the same incontinence two days after the operation and to the same extent as before. She confessed that she had thought this rather strange but,

as the eminent gynæcologist had assured her that she was completely cured, she had never doubted it. Here we see a case not only of auto-suggestion in the surgeon, upon the lines I have pointed out, but one in which the hypnotic influence had also been firmly impressed upon the patient, until Dr. Skene made the "reversed passes" and finally really cured her laceration.

I have felt that some introduction to my subject was necessary, even at the risk of tiring you, for nothing is truer than the sad fact that an operation because it is *called* plastic does not by any means necessarily belong to the domain of true plastic surgery.

### *Anatomy.*

I have said that all plastic work must be based upon an appreciation of mechanical principles. I need not apologize, then, in reminding you of the mechanical forces which, when disturbed, go to form the morbid anatomy of prolapsus uteri.

We know that the pelvic fascia, passing down from its attachment at the superior strait, divides into various layers above the cervix uteri; one layer passes downward and forward below the bladder forming the septum between this organ and the anterior wall of the vagina; another passes from behind the cervix, spreads out over the levatores ani muscles and becomes continuous with the upper layer at its attachments along the rami of the pubis; another layer of fascia, after reduplicating itself over the broad ligaments on each side of the pelvis, passes backward from the cervix, surrounds the rectum and binds it back against the coccyx. Thus we find two opposing forces in play which, in a state of integrity, maintain a perfect balance. Each organ remains in its allotted place and the proper tension of the connective tissue, together with that of the pelvic blood-vessels which it supports is maintained. But, let the integrity of this fascial tension be interrupted, by a tear or overstretching, and we at once find that the balance of opposing forces is lost; a relaxation of tension in one direction means an increase of tension in another. Relax the tension of the levator ani fascia, for instance, and at once the action of the transversus perinæi muscles and of the coccygeous muscle assumes undue prominence.

The story of complete prolapsus uteri is this:

During labor the cervix is torn, in all probability and generally I think, by the shoulders of the child; because when these pass through the neck especial pressure is exerted in two opposite directions out-



ward, while in the passing of the more or less globular head this pressure is evenly divided and is less likely to rupture a dilating circular muscle. When the head does rupture the cervix it will, I think, be what is called a circular laceration, showing that the lacerating force was equally exerted in all directions. When the descending head is crowded down with force upon the posterior wall of the vagina at the outlet and the tissues cannot relax quickly enough to give it exit, we find that the entire effect of the *vis a tergo* is applied exactly behind the extreme attachment of the levator ani fascia in front to the rami of the pubis. Unless the head quickly slips past this point and on to the perinæum, rupture must take place through the fascia across the vagina. The two levators ani, no longer held together by their relaxed fascia and feeling the traction of the transversus perinæi muscles on each side, separate and are drawn back like the two halves of a divided curtain. At the same time, the coccygeus muscle, no longer opposed by the levatores, draws back the anus towards the coccyx, thus tending to change the curve of the rectum from concave to convex. And very soon, there being nothing to oppose it, the weight of the rectum and the force of gravity force the wall of the vagina downward and forward and rectocele results. So far we have a large, heavy subinvolted uterus, due to its lacerated cervix, and a prolapsed vagina. The connective tissue of the pelvis, at the vaginal outlet especially, has become stretched and cannot furnish proper support, with resulting dilation and congestion of the pelvic veins. But this is seldom, at first, enough to cause complete prolapsus, for the anterior vaginal septum, the broad ligaments and the posterior rectal fascia for a long time resist the downward traction of the uterus and vagina. After repeated labors, however, the entire pelvic fascia and connective tissue become so relaxed that the heavy uterus is at last resting in the hollow of the sacrum and little by little it protrudes through the vulva, carrying with it the vagina and the fundus of the bladder.

#### *Operations.*

The indications in this case are clearly as follows: To cause involution of the uterus, thus rendering it lighter and capable of support by the pelvic fascia in the broad ligaments and elsewhere; to renew the tension of the pelvic fascia throughout the pelvis, that proper support may be given to the levatores ani, the connective tissue and its vessels and to the rectum and bladder. When we have accomplished this task we have restored the patient to anatomical as well as functional health.

This is the problem which Dr. Thomas Addis Emmet meets and solves in his three-fold operative procedure. I will not attempt to describe each step of these three operations in detail to-night; in the first place because of want of time; secondly, because no detailed description can convey any practical and adequate idea of the technical work, which must be actually seen, and more than once, to be thoroughly appreciated; and, thirdly, because it has all been described many times already. I will content myself with pointing out the mechanical principles involved in each operation and the method of their application.

I cannot refrain from referring here to a most important adjunct and preparatory treatment to the cure of prolapsus uteri. This is called the "inclined decubitus" position and consists, after replacing the uterus and pushing it up as far as may be in the pelvis, in placing the patient in bed and raising the foot of the bed from twelve to eighteen inches from the floor. The result of this position, which should be maintained uninterruptedly for several weeks, is to cause contraction of all the pelvic veins with a resulting involution of the uterus and vagina that is astonishing. I have frequently seen the uterus reduced to half its former size in less than a month by this means with a corresponding involution of the overstretched vaginal tissue. While this result is only temporary and the old condition would quickly return if we stopped here, it is a great assistance both to operator and to patient in making the subsequent operations much less formidable in extent, easier of performance and the final result more assured and rapid.

#### *Operation on the Cervix.*

Whichever operation is performed on this organ, two objects must be attained, viz., first, complete removal not only of all scar tissue but, equally important, of all diseased tissue. In all long-standing lacerations of the cervix we find not only scar tissue in the angles but a zone of greater or less depth, extending throughout, which is composed of dense tissue, excavated everywhere by cysts of large and small size. Not only the cysts themselves but all this tissue as well must be thoroughly excised; secondly, the excision must be carried down to a plane level with the bottom of the tear where it touches the canal. This point is found when we reach a plane at which the canal is of uniform diameter. I need not say that in the cervix first union by "intention" is essential to success. Whether trachelorrhaphy or amputation should be done depends upon the presence or absence of this dense, cystic tissue to which I have referred.

After three weeks in bed, following this operation, the patient may get up but complete involution will not take place usually until a longer time has elapsed. If the patient's strength will permit and the involution of the uterus has not been rapid I have been accustomed to keep her in bed in the interval between the cervix operation and the

#### *Operation on the Anterior Wall.*

This operation is undertaken for the purpose of renewing the normal tension of the pelvic fascia and consists in taking a pleat in the overstretched vaginal septum which divides the bladder from the vagina.

When the patient is in Sims' position, the uterus is sharply anteverted, the cervix being held back as far as possible in the hollow of the sacrum. Two points are then found in the anterior vaginal wall on each side of the cervix which, when drawn forward, will put the septum on the stretch. These points are then denuded and brought forward in front of the cervix and are united together upon a denuded surface sufficiently wide to receive them, immediately in front of the cervix. The immediate result of this procedure is that the uterus is held in its normal position of anteversion and two folds are formed on the anterior vaginal wall, which exactly represent the amount of overstretched tissue which formed the cystocele. Each fold is then denuded and united together with sutures in the median line down to the urethra, with the result that the anterior wall of the vagina resumes its normal appearance in width and length.

#### *Operation on Posterior Wall.*

This operation is thus performed: The apex of the rectocele is drawn upon with a tenaculum until it is found that traction is made upon the levator fascia back at its attachment to the rami. Thus the extent of the tear and retraction of the levator ani muscles and their fascia are determined.

The central point of the retracted fascia, thus determined, is then brought forward and united on each side at a point indicated by the carunculæ myrtiformes. When the posterior wall is brought up to and is united at this plane it will be in contact with the anterior vaginal wall and the vagina be restored to its normal condition.

If we catch the apex of the rectocele with a tenaculum and draw it forward to the os, and upward to the same plane with the remains of the hymen, as indicated above, two sulci are formed, one on each of the vagina, and these indicate the position and extent of the denuda-

tions to be made. The lines of sutures on both sides of the crest of the rectocele, which after denudation becomes a tongue of tissue, are separate and each line unites the sides of each lateral sulcus from the point where the first suture is inserted, a point equally distant from the apex of the rectocele and from the caruncle on that side, to the osteum. Each suture is passed downward and forward, thus, when tightened, raising, step by step, the posterior wall upward and restoring the normal distance between the fourchette and the anus. The prolapsed and everted posterior wall (the rectocele, in fact) is thus rolled inward and its line converted from the abnormal convex to its normal concave shape.

When both lines of sutures in the sulci are united we find that the carunculae lie in contact with the tongue of tissue representing the denuded crest of the rectocele lying between them. These three points are united by one suture which is passed from one caruncle through the tongue and out at the other side on the same level. This is called the crown suture and completes the work of restoring the posterior wall and the normal tension of the pelvic fascia. It lies at the entrance of the osteum vaginae. Below the last mentioned suture we then find a denuded space with the lower portion of the tongue in the center. This is closed by a line of interrupted sutures passed from side to side catching the tongue in transit. These sutures are below and in front of the fascia and the plane through which they pass is the fourchette.

I cannot insist too strongly upon the value of silver wire in all plastic operations upon the vagina. It is aseptic and non-irritating, it is capable of being bent flat and remaining so, undisturbed, for any period. It alone can be made to bring separate layers of tissue in exact contact without bunching or squeezing and it acts as a splint to hold and mould the tissues into any desired position. These results cannot be obtained by any class of sutures which are not metallic. The use of silver wire requires special training and dexterity in its use, both to insert and to remove; but so also does the practice itself of plastic work. The difficulty, therefore, of which some men complain in the use of silver wire is surely no just argument against it and the value of its use in the hands of an expert far outweighs any exertion of dexterity and even sometimes of patience. So important do I consider the use of silver wire in plastic surgery that I think the decline of knowledge and appreciation of this division of surgery is directly due to the substitution of other suture material by so many gynaecologists who attempt more or less plastic surgery. I know, in my own case, that I would lose not only my facility for technical work but to a



large degree a clear appreciation of the scope and possibilities of plastic surgery, were I to abandon the use of silver wire.

I thank you, Mr. President, and gentlemen of the Brooklyn Gynæcological Society, for your patience and for the cordial reception which you have extended to me.

91 Madison Ave.

---

## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

## EDITORIALS.

### THE MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Consistently with our constant endeavor to urge upon the profession the great importance of consolidation and of a unity of interests, in line with our efforts to help practically in bringing about this much-to-be desired aim, we have more than once referred to the unhappy and unnecessary division of forces which exists in the medical profession in this State.

Owing to a vehement quarrel over issues which now are practically dead, the profession a generation ago split itself into two rival factions, the Medical Association of the County of New York and the Medical Society of the County of New York. So disdainful and angry were the rival sentiments encouraged by this factional fight that the seceding members of the American Medical Association, who formed themselves into the New York County Medical Society, were looked upon, it is no exaggeration to say, by the members of their former association as even a little worse than homœopaths, who at that time were the bone of contention among us; with this difference, however, that

efforts were not made to secure the "bone" on either side but, on both sides, to get rid of it. Over the discussion of ways and means to accomplish this common object the profession was deeply riven, not only in this city but in others.

The American Medical Association determined upon repressive and offensive measures of the sternest sort and it was confidently declared that thereby within a few years homœopathy would disappear. The seceding New York men disapproved of the policy inaugurated by the association, both upon the ground of expediency and of humanity, and they were therefore forced out of the association as abettors of and consortors with homœopaths.

Looking calmly back upon those troublous times we can smile over the confident prophecies then uttered and the actual fulfillment of events which time has brought. We find that the seceding founders of the County Medical Society did not cease to be "regulars," did not consort with homœopaths but, on the contrary, remained as absolutely ethical as the most ethical member of the association. We further find that the homœopaths have multiplied and flourished exceedingly, apparently upon the proverbial pabulum which the persecution of the American Medical Association presented to them and finally we find that the old acumen and suspicion that existed between the rival societies in this State have practically disappeared with the contentions and issues which caused them. For homœopathy has ceased to be an issue with us; in the first place, because we recognize the fact that it is not within our power to affect its extension in any way and, secondly, because we and educated homœopaths have steadily approached nearer a common basis of thought and practice as the years have passed. There is no respectable homœopath to-day who is not taught the basic principles of pathology, of surgery and of the practice of medicine, as these standards are accepted by medical men throughout the world. The taunt of ignorance and want of scientific education cannot now be cast with justice at these men. On the other hand, in the field of their special teaching founded on the principle, "*similia similibus curantur*," we have approached them in modern practice to an extent that a generation ago would have been deemed impossible.

What would the past generation have thought of the very general use of alkaloids and their doses, of antitoxins, sero-therapy and animal extracts? Is it not now advocated and a largely approved treatment that we cure the bite of a serpent by the injection of the venom of the same animal? In this, as an example of similar treatment, are we not seeking "a hair of the dog that bit us?" And do we not hereby tacitly

acknowledge that at least sometimes *similia similibus curantur*? We fear that our only just contention with the homœopaths now-a-days is that they are not honest in clinging to a name and a designation which a large number, if not the majority of them, do not strictly live up to in their practice. And yet we cannot fail to recognize the fact that their segregation and exclusion is more our fault than theirs.

Personally we believe that the solution of homœopathy would lie in a legal measure which, having compelled all medical candidates to pass the same strenuous State examination, would receive and recognize all as qualified practitioners of medicine, without other designation. We doubt, if our medical societies were thus opened to all really qualified practitioners, that the name *homœopath* would be longer heard in the land.

How unnecessary and pernicious, therefore, is it that the professional men themselves, about whose ethics there is no question, should be divided and their strength dissipated by the two societies we have referred to in the county of New York.

With the weakness of human nature before us the practical question is not why do they not amalgamate but who is to take the initiative? We think that the opportunity for a double initiative (to put it in an Irish way) is now presented by the society recently formed and designated *The Medical Association of the Greater City of New York*.

It will be a hopeful omen if the day come when both the county medical organizations shall amalgamate in this one society. It would be a distinct advance in the corporate interests of the profession.

And we cannot avoid the conclusion that it lies in the power of the American Medical Association, more than in that of any other organization in this country, to produce true union of the profession and to make itself actually and in fact the representative mouthpiece of medical opinion in the United States. Instead of representing itself alone, as it now does, it should embrace, hold the loyalty and direct the energies of every medical man in this country. But to accomplish this, its natural mission, it must modify its policy and regulate its laws to met the exigencies of the day. It cannot expand on dead issues.



## IN THE MATTER OF BELLEVUE HOSPITAL.

Reflective persons familiar with the political methods that usually prevail at Bellevue Hospital will be pained to learn that the present condition of affairs (which is in general the same as most past conditions) is largely due to the fact that the progressiveness of the Commissioner of Public Charities has been hampered by the narrow policy and selfish aims of the Medical Board, which is supposed to confine its malevolent activity to the mere detail of caring for the patients. Just how the Medical Board, being practically powerless, having no control of the management of the institution, no handling of the appropriations and no authority in their expenditure, can be responsible for the general depravity is not apparent. They have had to accept conditions as they found them and do the best they could. Therefore it is not astonishing that the report required of them by the Commissioner in reference to the findings of the Grand Jury is an implication that the demand for bricks without straw is unjust. In fact, we judge that they originally betrayed some shade of annoyance at the "Tag, you're it" attitude of the Commissioner, for we learn that their first report was not acceptable to him and that the one published is a second, somewhat emasculated, edition. Still, the latter does very well and it would seem that the Commissioner in attacking the Medical Board had launched something in the nature of a boomerang, though how seriously it will damage him, his office and organization, it is as yet hard to say. He has, however, desired to learn what is the matter and we cannot but think that careful study of the report should give him no uncertain information. It seems strange that the Commissioner should develop so magnificent an activity only at this late period of his service; that only now he should perceive that reforms are needed and that it is the hampering influence of the Medical Board that hitherto has rendered his unmade efforts futile. We must infer that a spectacular case like that in the insane pavilion was necessary to arouse all this late and latent energy regarding other abuses not less significant and, though less spectacular, far more wide-reaching, in that they affect not one but all the patients in the institution. At last the Commissioner throws off all reserve, resolves to shield the Medical Board no longer from the consequences of their infamy but, with averted eyes, to lay the blame—anywhere save upon himself. Of course, many people much less familiar with the hospital than the Commissioner presumably is could have suggested many of the needed changes; no doubt the Medical Board could have done the same more

early in the Commissioner's service. Possibly they have done so, possibly not. One allowance, it is true, must be made for the Commissioner: that is, that the appropriation is always limited and that what there is must be made "to go 'round."

As to the recommendations themselves, now that they have virtually been referred to the public instead of being quietly interred by the Commissioner, it is probable that something will be done. We feel sure that, in spite of all the unpleasantness of it, good will result from this publicity, and we feel sure also that no one will more gladly welcome the event than the Medical Board. The necessity for many of the changes is too obvious to need comment. With regard to the insane pavilion, the position of the Medical Board is a somewhat anomalous one; having charge of the wards but no jurisdiction over the examining physicians, it is not unnatural that they should regard their authority as more nominal than real and that from this division of authority abuses should arise. Formerly the pavilion was in charge of a competent specialist and that it was ever put in the hands of the house staff is most unfortunate. When we consider that for their regular work it is considered necessary that the internes be most carefully and gradually trained, so that on becoming house-physicians they shall be accustomed to deal with the class of cases that will confront them, it is evident that the care of these patients, who more than any other require the exercise of special skill, should not be entrusted to an interne with no preparatory training whatever in this line. So far as the Medical Board is concerned in this matter, we note that it "renews the recommendation of the committee of inspection" that a specially qualified physician be put in charge. This of course is the solution; this physician should have full rights to demand and get as many and as competent attendants as may be needed, should exercise full authority in these wards and should be directly answerable for all that occurs there.

Another important modification, already instituted, is the establishment of a superintendent who shall wield a greater authority than was intrusted to the warden. Both the warden and deputy warden are competent men who have, we believe, performed their duties to the satisfaction of the Medical Board, as was evidenced by the desire of many members of that Board to retain them in office at the beginning of the reform administration. They have, however, no authority over the nurses and no power of initiation nor means to carry out necessary changes: practically they merely represent the Commissioner and execute under his direction the business of the hospital. To ascribe blame

to them for their limitations is as useless as unfair and seems but another effort to shift responsibility; but the Commissioner's appointment of a superintendent with sufficient real authority to be responsible is a wise idea and approved as such by the Medical Board. We fancy, however, that if the same authority had been vested in the warden and deputy warden and if definite instructions as to what was expected and desired had been given to them, almost as good results would have been attained. Though there is an admitted advantage in having a physician as the head of the institution, it is not nearly so great as that of having a person with real authority.

All these matters—past abuses and immediately necessary reforms—point, it seems to us, in one direction. We do not believe that any very radical and permanent changes will be wrought so long as the hospital continues to be a political factor, most of the time under the control of a political organization. The charter revision contemplates a fundamental reform in aiming to take the hospital out of politics, by placing it entirely under the control of a board of trustees who shall be chosen on a non-political basis and serve without pay. The plan proposed is based upon that of the city hospitals of Boston and Cincinnati, which institutions are a credit to those cities, in marked contrast to the city hospitals here and in other cities. These trustees are to be appointed by the Mayor and to this end a list of suitable names is to be proposed to him by several representative charitable organizations. In order that a certain degree of responsibility may rest upon the Mayor as head of the city government, it is not made incumbent upon him to choose from these lists but it is expected that there will be sufficient moral pressure to that effect, as the Mayor would hardly care to be so directly answerable as would be the case should abuses arise in a board entirely of his own choice.

It is unfortunate that the scheme does not include all the city hospitals and the almshouse (which is virtually a hospital) but this at present seems impracticable. This incompleteness does not, however, constitute an efficient adverse argument; it does not seem wise to refuse one salutary change because it is impossible to make others. Moreover the plan can be tested and its details worked out in practice, when it will doubtless be possible to extend its scope. The greatest difficulty we anticipate will be in getting adequate appropriations—a difficulty which, as we have pointed out, must be allowed for in criticizing the present system; still, it would be easier to place the responsibility in such matters when there would be fewer questionable factors to consider. It may also be objected that should the moral

pressure upon the Mayor fail of its object and should he make the appointments from among his political adherents, things would be worse than they are now and, instead of one Commissioner, there would be many trustees to find places for their friends. We believe, however, that such pressure will be efficient; and with men chosen purely for their fitness without political reasons, serving without remuneration, having no interests to subserve but the good of the institution, it seems that Bellevue Hospital should at last take the position among the great hospitals of the world to which its name and fame and its place in this great city entitle it.

---

## CORRESPONDENCE.

## A FURTHER REPORT ON PARASITIC INVASION OF THE HUMAN MILK DUCTS.

CHICAGO, ILL., Feb. 6, 1901.

*To the Editor of the American Gynecological and Obstetrical Journal:*

SIR: In January, 1899, I reported, in your JOURNAL, three cases of parasitic invasion of the human milk ducts, and in February of the same year, two supplementary cases of the same. Since that time I have been constantly looking for similar cases, but have not met with any until the present time.

Some days ago a negress came to my office complaining that her milk did not seem to agree with her child, an infant six months old. She said that during the first five weeks of the child's life it had gained in weight and seemed to thrive, but during the past week the child had vomited a great deal, lost much flesh, been very restless and cried almost continually, as though in intense pain. She further said her milk had changed in appearance from a rich yellowish white to a bluish watery color.

I examined her breasts and found them firm and of normal appearance, except they were more deeply pigmented in some places than in others. The milk appeared to the eye as somewhat lighter in color than normal milk.

I drew some of her milk and put a specimen under a microscope magnifying 480 powers. A close examination showed minute moving bodies which were endowed with life. These were more apparent



when the specimen was allowed to dry or when treated with chloroform. I soon became convinced these bodies were identical with those described in the paper before mentioned.

The symptoms presented by the child were the same as in the five cases previously mentioned, except that this child did not have convulsions, but the parasites were not as abundant in the milk in this case as in the former cases.

In my previous paper I, perchance, gave an erroneous impression of the ease with which the parasite is found. The parasite is not discovered by a cursory examination, but by a most careful and painstaking one. They are more easily discovered by allowing the milk to stand in a warm place, when they develop in size and are much more easily demonstrated. In the former cases I allowed the milk to stand several weeks, when, under a microscope of 480 powers, some of them appeared as bodies nearly one-fourth of an inch in diameter.

I have heard a number of careful practitioners make complaint of encountering cases where the mother's milk has disagreed with her child and where they have been compelled to resort to artificial feeding. It has occurred to me that some of these cases may be due to the parasite I have described.

In two of my earlier cases I have attended the mothers in a subsequent confinement and, in both of these, the mother's milk has been free from the parasite and they have been enabled to nurse their children.

EDGAR D. SMITH, PH.C., M.D.

306 Division St.

---

## REVIEWS.

Atlas and Epitome of Gynecology. By Dr. O. SCHAEFFER, of Heidelberg. From the Second Revised German Edition. Edited by Richard C. Norris, M.D., Gynecologist to the Methodist Episcopal and the Philadelphia Hospitals; Surgeon-in-Charge of Preston Retreat, Philadelphia.

That this Atlas and Epitome of Gynecology of Dr. Otto Schæffer has been favorably received in this country is evinced by the appearance of this, its second edition. This atlas is supposed to occupy a position midway between the quiz-compend and the more pretentious works on gynecology, and its value to the medical student and the general practitioner is to be found, not only in the concise explanatory

text, but especially in the *accuracy* of the drawing and the life-like *coloring* of the *illustrations*. The opportunity for personal observation and examination of gynæcological specimens and subjects in the clinic and dispensary, both for students and practitioners, are necessarily limited, so that next to such study that of well-chosen and executed illustrations seems to be the most satisfactory. The colored plates reproducing most accurately the appearance of fresh specimens, will help to form a mental picture of the pathological changes induced by diseases of the pelvic organs, that cannot be produced by description alone. The text has been divided into two parts, the continuous portion being written from an entirely practical standpoint, while the text explanatory of the plates, deals with the purely theoretical, scientific, anatomic, microscopic, and chemic notes; so that in referring to the work, the one text will not have a disturbing influence upon the other. The wisdom of this method may be questioned, as it would seem to cause confusion in the mind of the reader; and in this connection might also be mentioned the difficulty of finding references, which are only indicated by the section (§) mark, instead of the page number. The material has been classified from an etiological standpoint as far as possible. Differential diagnosis has also been the subject of especial attention. The latest scientific acquisitions have been incorporated into the text of this edition, and new illustrative material from autopsies and operations, as well as from the living subjects, has been added. The work contains 90 colored plates, which are fine reproductions of water-colors, and 62 text illustrations, consisting of cuts, lithographs, and semi-diagrammatic plates. The work is, of course, essentially German, but editorial comments have occasionally been inserted in order to harmonize or point out the difference between the author's teaching and that generally approved in this country. The typographical work is good, the reproduction of the water-color plates being particularly commendable.

J. R.

---

## TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Stated Meeting, January 3, 1901.

The President, JOHN C. DaCOSTA, M.D., in the Chair.

*Pyosalpinx Empties Through Uterus.*

Dr. L. J. HAMMOND: This is a report of a case that has been of considerable interest to me, having freshly in mind the paper presented to this Society by Dr. Clark on the "Conservative Treatment of Fluid-Inflammation within the Pelvis."

This is a woman, 24 years of age, married; three children; I think, one miscarriage. The last pregnancy she miscarried. I saw her two weeks ago to-day and found the left pelvic region full, thoroughly distended, so that by vaginal examination I felt quite sure there would be no difficulty whatever in tapping through the vagina and draining the cavity through the vagina, as I believed it to be an abscess cavity. She was removed to my place, and the husband was very desirous indeed that nothing in the way of an operation should be done, at least for a few days. She was very sick, indeed, but having her directly under observation I thought I could risk a few days in studying the condition. I placed her, of course, absolutely at rest, and with pressure—three-pound salt bags over the abdomen and vaginal douches, six quarts of water at a temperature of 115 to 118 every three hours during the entire twenty-four hours—determined to note the results. To my surprise, within twenty-four hours after admission there was a free sero-purulent discharge from the uterus and a very rapid subsidence of the left pelvic effusion. The treatment was continued, as I have outlined. In addition, however, the bowels were freely acted on by saline solution every second day. The treatment had been, as I say, continued on those lines until to-day the patient is absolutely well. There is only left to indicate the existence of a former pelvic inflammation, what I believe to be an enlarged left tube. The temperature and pulse are both normal. When she was admitted she had a pulse running from 116 to 124, temperature 102 to 103. That was for the first twenty-four hours. After that it rapidly subsided, especially after the discharge of pus from the uterus had begun.

The case was of extreme interest to me, because of the rapid subsidence of the very pronounced inflammatory exudate within the left pelvic region and also because of the marked conservatism I had practiced in the matter, rather exceptionally. I had always, and indeed I thought in this case, as in all heretofore, I would be obliged to do the usual operation of free incision through the vagina, or through the abdominal route. It certainly was a very gratifying result, and I would like to hear from those of larger experience whether they have had such results following this method.

#### DISCUSSION.

Dr. J. C. DA COSTA: Did you notice where the discharge came from—from the uterus or walls of the vagina?

Dr. HAMMOND: I introduced a duck-bill speculum, in order to assure myself on this point. The cervix was quite patulous, enabling me to introduce my index finger after the second time I examined her. I saw it pouring out directly through the cervix. The husband gave a history of having had gonorrhœa. Therefore, the woman was infected—gonorrhœal infection—six or eight weeks previously.

Dr. SHOEMAKER: Did this follow abortion?

Dr. HAMMOND: She aborted at the last pregnancy, which was probably a year before any pelvic symptoms developed. I am not positive as to the date, but so far as I could learn it had no relation to the present condition. There seemed to be a direct history of gonorrhœal infection.

Dr. GEORGE ERETY SHOEMAKER: It seems to me that the crucial point in that history is that nature came to the relief of the condition by draining the tube. That unquestionably does occur in some of these infected tubes. Whatever the theories may be, I have known it to occur in several instances, and when the drainage is sufficiently free there is nothing to prevent permanent ultimate recovery. Surrounding adhesions, and what is called "exudate," disappear. The difficulty is that this method of cure is so uncertain and so unusual that in the majority of cases we are driven to the operation later.

I have watched a good many cases of acute salpingitis, and it is my custom, when they come to the hospital in the acute or sub-acute stage, if there is not some urgent reason for operating, and if the leucocyte count is not steadily rising, to let them wait until the acute symptoms subside, before operating. Sometimes I have kept them three or four weeks under conservative treatment, and occasionally a



case will determine of itself whether the vaginal or abdominal route is the better one, but the case of the happy solution to which Dr. Hammond refers is very unusual. In salpingitis there is not as much danger as in appendicitis, from waiting for acute symptoms to subside, and a more conservative operation, as regards loss of organs, may be done at the later date.

Dr. NOBLE: As Dr. Shoemaker has already pointed out, the reason the conservative treatment was so successful in this case was that nature drained the pus accumulation, instead of the surgeon. My own experience is quite similar to that of the other speakers, that this termination of acute suppurative inflammation in the pelvis is unusual. I have seen, however, more particularly in puerperal cases, quite a number of patients, in whom there was an enormous exudate, go on to recovery, cases where early in the history of the case the constant high temperature and sweats led one to suspect that pus was present. Between ten and fifteen years ago I was connected with an obstetrical hospital, and the asepsis of the lying-in woman was not as perfect as it is to-day, and I had occasion to see quite a number of patients of this kind, and several of them I remember very distinctly, where not only the pelvis was full of exudate, but where marked peritonitis had been present, and where the abdomen, from the umbilical region down, was more or less solid from peritonitis and exudate. I remember very well some of these cases becoming well, at least getting over the primary attack, without any operative interference. I have seen quite a number of cases, puerperal cases also, in which an immense exudate in the pelvis was a cellulitis—lymphangitis—acute puerperal cellulitis—in which suppuration did not take place and where absorption occurred after a number of weeks. I think after labor, if intra-peritonæal abscess does not occur, that this result is far less uncommon than in the gonorrhœal cases. In gonorrhœal cases we do know that even the chronic pus tubes occasionally discharge. Only last month Dr. Downes reported such a case here, in which there was recurrent discharge of purulent material from the right tube, and where this was demonstrated to be the case by subsequent abdominal operation. I have seen a number of cases in my own experience. In general, I think, in the gonorrhœal cases it is very uncommon and not to be looked for. So that the result from Dr. Hammond's case, judging from my own experience, was a happy accident rather than the result of the treatment employed.

Dr. J. W. FISHER: I have a patient under observation now and have had for several years who has a regularly recurring, profuse, watery

discharge from the uterus following each menstruation. Previous to the onset of the flow, usually an enlargement appears on one side of the uterus, after menstruation this discharges its contents, with a consequent diminution in size. It is a watery discharge, and evidently represents the fluid constituents of a hydrosalpinx that finds free drainage through the uterine extremity of the tube. I have watched this case for over three years. Once in a while she has an acute attack of pain upon the side of the enlargement, and in several instances upon making pressure upon the mass I have caused quite a free discharge of fluid to take place through the vagina.

Dr. DOWNES: The case that I reported last month was not a case of pus tube. It was a case somewhat similar to the description of Dr. Fisher's case. It was a fibroid in the cornu, blocking the tube, causing it to fill, but emptying when the tension became sufficient to lift off the fibroid. I recall one or two cases somewhat similar to that described by Dr. Noble.

I remember having a woman with puerperal sepsis within a year who was in very bad shape, whom I curetted and douched continuously, and in whom I found a very large mass on one side. She had all the evidences of syphilis, including eruption. It was a somewhat complicated case. She was delirious for over a week, but she seemed in very good shape all the time. There was quite a discharge, and there was good reason to believe it was a gonorrhœal case. She got around. I insisted on operating upon her at that time, after I had her in fairly good shape, but she wouldn't have it done. She came up to St. Mary's within a month, and I found no evidence whatever of the pelvic mass. She wanted an operation at this time, but I refused to give it to her.

I had a case brought down to the operating room to-day which came in a few days ago. She was married nine months ago. Her history: She had gonorrhœa immediately following marriage. She had a profuse discharge at that time, and has had it off and on ever since. I detected considerable enlargement in the left tube, and made a diagnosis of pus tube with elevated temperature. I found this tube three days ago, and to-day I brought her down and intended to open her abdomen after curetting, but the tube seemed to have become smaller. I dilated and curetted the uterus—and cauterized it with pure carbolic acid and alcohol, and gave her a very copious uterine douching for about fifteen minutes and let her go. It struck me to-day that there had been some recession of that tube since a few days ago,

and her temperature was a little lower, so I decided to give her a chance without resection.

Dr. STUBBS: I have had a case under note for a few years, somewhat similar to the cases reported—enlargement of the right tube. The patient at periods will have a temperature, a great deal of tenderness, soreness on the right side and nausea. After the occurrence of these symptoms she will have a discharge of pus from the bowel; then the soreness will pass away and she will appear to be well for some time. I think there is enlargement in the tube, and I think there is some connection between the growth and the bowel. I would like to know whether you think pressure has had anything to do with the favorable results in this case reported.

Dr. J. C. DACOSTA: Dr. Hammond's case, as Dr. Noble has said, to my mind is an unusual one at these times, not so frequently met with as was the case before we operated as early as we do now. It brought up to my mind, while he was speaking, two cases under my care nearly twenty years ago. It was before we operated on every growth in the pelvis, before we knew anything, we may say, or very little of asepsis or antisepsis, and the day when we were not at all afraid to use the uterine sound. One of the routine methods then was to use the uterine sound. One of these cases was about fifty years old, a widow for some years; the whole genitalia was inflamed, the perinæum and cervix, with a large mass in the left pelvis. She had high temperature and other symptoms of pus—septic infection. I told her she would probably have to have an operation done, and while examining her I put the sound into the uterus. It went up two and one-fourth to two and one-half inches on the right side. When I turned it to the left side, to my surprise, and no little anxiety, the sound slipped up five and a half inches. I took it out; and the next day, when I saw her, I noticed a change at once in the pulse and temperature; she said: "Doctor, I have been losing a great deal of pus." I said: "What do you mean?" Her answer was: "I have lost fully a pint of pus through the vagina." I examined her, and to my surprise that big mass on the left side was gone. Now, I must accidentally have hit with the sound the opening of the left Fallopian tube. It was probably distended with this pus, almost ready to burst, and the little manipulation must have allowed the sound to slip into it and, unwittingly, I catheterized the tube. There was profuse discharge of pus. The woman recovered, and she is well to-day.

The second case was that of the wife of a young business man in town who had a very large mass in the right side of the pelvis, a mass

as large as my two fists, probably four to five inches in diameter. I didn't introduce a sound into her, but I told her husband what I thought it was, and I thought an operation would be necessary to remove it. I didn't see her until two or three days afterward, when I made a visit to the house. The woman was in bed and told me she had had a profuse hæmorrhage the night before, a hæmorrhage so excessive that it soaked through the bed-clothing, soaked through the mattress, and there was a pile or mass of blood on the floor directly under the bed. When I examined her the mass in the right side had disappeared. She recovered without any operation, and I have not seen her for some time, but when I last saw her she was perfectly well. This must have been, to my mind, a hæmatoma of the right tube or ovary, which discharged as the other case had done, and, as Dr. Hammond's had done, through the uterus. We used to meet these cases more frequently twenty years ago when we did not operate on every case as we do now—operate on all abnormal developments in the pelvis that don't disappear under proper medical treatment.

Dr. SHOEMAKER: In my experience the gonorrhœal cases generally refill. I have in mind, as an illustration, the wife of a politician who absolutely refused operation. I had her under observation several years. Her tube filled and emptied.

Dr. HAMMOND: I quite agree with the remarks brought out in general discussion of the subject to-night, namely, that this conservative treatment not only does not apply to the majority of cases, but I would even be disposed to apply it to the greatest minority. It was the rapid subsidence of the inflammatory condition there that was such a surprise to my mind. I assured her she would have to be operated on, but I waited twenty-four hours to get her quiet and to get the husband's consent, without the amount of storm that in this particular case would have been great.

I have assured the patient that there is a large probability that the condition will recur, and should it do so, my advice was to have it at once removed. She is so very comfortable now that she, of course, would not listen to the advisability of an operation, and is to go home in a day or two, with the understanding that if it does, and probably it will recur, she is to have it removed at once.

As to the case referred to by Dr. Stubbs, I know of one I saw in West Philadelphia three years ago. It was a puerperal case, with a large mass filling the entire left pelvis. I saw her about 7 o'clock in the evening and advised operation the next morning. To my surprise, when I went there prepared to operate, I found the woman



comfortable after having passed, per rectum, approximately  $1\frac{1}{2}$  quarts of a more or less gelatinous material with some pus in it. I have never heard from her since; she recovered at that time. I do not know anything about the subsequent history of the case.

This, Mr. President, I would like to say, was not a lymphangitis, nor so-called cellulitis, but distinctly a fluid mass.

*Two Interesting Cases: I.—Multiple Sinuses in the Perinaeum resulting from Infection and the Failure to remove Sutures. II.—Pelvic Abscess resulting from Attempted Abortion in an Unimpregnated Woman.*

BY CHARLES P. NOBLE, M.D.

(See page 100.)

#### DISCUSSION.

Dr. SHOEMAKER: Did you operate through the vagina?

Dr. NOBLE: Yes, both operations were done through the vagina. This time there was an incision through one broad ligament, and Douglas' pouch was opened partly, and my fingers went to the pelvic wall on each side under the tubes.

The history of the case is very clear of a woman thinking herself pregnant, and attempting to produce abortion, producing a pelvic abscess involving both appendages.

#### *Umbilical Hernia with Ovarian Cyst.*

Dr. DOWNES: Two months ago I was called to see an old lady sixty-five years of age with an abdominal enlargement; she had been tapped six times in as many months, and at each tapping from sixteen to nineteen quarts were obtained. Her condition gave evidence of an ovarian cyst. She gave a history of having been in one of our large hospitals, where the surgeon refused to operate on her, a little over two years before. Her pulse was very weak, but she seemed to be pretty active. At that time she couldn't surround the abdominal enlargement with her own hands, nor sit in a chair, except on the very edge. I examined her, and she had every indication of abdominal ascites. She had also anasarca, which extended up to the thighs. I made a guess diagnosis of rupture of an ovarian cyst, but could not understand how she could stay sterile after six tapplings. I varied between that diagnosis and cirrhosis of the liver. She begged to be operated on, and said she could stand it. She had to be tapped by her physician. I did not see it, but it was a failure, there only being in this last tapping eight

quarts, and it was very thick. The only evidence of cyst was that she had a vaginal discharge for a year and a half before, which had since ceased, and there was some evidence of a little solidity on examination through the vagina. Per abdomen she had every indication of abdominal ascites—fluid extended above and on all sides. I made the diagnosis, and finally said I would operate on her if she had courage enough to stand local anæsthesia. She also had a very large umbilical hernia. A month ago to-day I operated on her at St. Joseph's Hospital, with the assistance of Dr. Nassan. Using Sleigh's fluid, I opened the abdomen from the ensiform to the pubes. I found a large ovarian cyst, unruptured. I took sixteen quarts out of it. I then delivered the very large ovarian cyst with a very broad pedicle, adherent to everything. After taking it out she was in good condition. I then surrounded the umbilical hernia by a fresh injection of fluid—removed the hernia, which contained the most of the greater omentum, and sewed up the incision, the stitches being placed about a third of an inch apart. The woman, talking, went off the operating table, to my mind, better than she went on it. The following day she walked across her room, in the temporary absence of her nurse. I tied a few bleeding points, and used heavy chromacized catgut for the pedicle, which was tied in three parts, and on the third day she began to vomit. She had an elevation of temperature. I could not see why she became septic, but I knew she was, and on the seventh day I took the stitches out and obtained a good explanation of the cause. Two hours after that, down where I had united the hernia, pus came out, her temperature dropped, and she seemed to improve, but she died on the eighth day, of suppression of urine, having passed none for the last twenty-four hours. She had albumen and casts in her urine before operation, and had a very weak heart. She would have gone through with the operation, if it had not been for the catgut, which I did not prepare. It was chemically prepared and evidently not sterile. It was probably the largest operation ever done under local anæsthesia. The woman went down from the operating table better than she went up. She was better the next day. And it is unfortunate that I have not the case to report as a success, because every now and then one does see a person advanced in years, with bad kidneys or bad heart, to whom you cannot give ether, nor do I think you can give spinal anæsthesia. This woman had a cyst that was attached to nearly all the intestines within her abdomen, and I feared I could not take it out without distress. One thing only she complained of—when I made

traction on the growth, removing it and pulling on the pedicle. I report the case as showing the possibilities of local anæsthesia.

As showing the difference between cases and methods, I will report a case that I operated on the morning after this woman died, in the same hospital. I had a patient who gave every indication of a sub-acute case of appendicitis, whose first acute attack had been diagnosed seven years ago, and who had a few recurrent attacks since. The morning before I operated on her I examined her per vaginam. I found a large mass in the right pelvis, and I still persisted in a diagnosis of appendicitis and made also a diagnosis of ovarian cyst. I did not know how big it was. I did not care to make firm pressure. I sent her to the hospital and operated on her in the morning. I made an incision through the semi-lunar line, removing the appendix together with this growth. I found a large cyst the first thing; it was a pretty large one, and in manipulating it ruptured. I then freed the growth and drew out this cyst, followed by a large number of cysts which perhaps would cover the whole bowel surface. It was one large ovarian cyst with probably twenty conjoined—I am going to bring this specimen down some evening—para-ovarian cysts with one large fibroid about the size of a good orange, all glistening, except the ovarian, and transparent, one containing a lot of blood. This was removed by my electro hæmostatic forceps; one large adhesion attached to the bladder was also removed by the forceps; no ligature whatever. I then brought up the cæcum and found an actively acute appendicitis; this I removed by the electric forceps one-half inch from the cæcum. In this case, after using the forceps I put a purse-string of fine catgut around the cæcum, so as to invaginate this small stump. This woman reacted from ether quickly, and since then she hardly has had an abdominal pain. This woman had absolutely no abdominal distention at any time; she passed gas by the bowel within twelve hours, and her bowels moved twenty-four hours after the operation. As compared with any other abdominal section which I have performed, except where I have left absolutely nothing in the abdominal cavity, this case had the smoothest convalescence. The patient convalesced with a moist tongue, a flat abdomen without pain, except the pain I described, due to the bowel distended with gas and adhering lightly to the inner side of the incision; none of the ordinary pain that follows in similar sections; and this was due to the fact that no foreign body was left in the abdominal cavity, and that the hæmostased tissue was rendered sterile. This is in favor of the hæmostatic forceps. I report this case in connection with the other to show that there is a good reason why, if it were

possible, we should control bleeding without leaving in the abdominal cavity any foreign body, even an absorbable one, if it is practicable, and I think the day is coming when it will be proven to be practicable. The forceps I am using now do not give quite sufficient pressure to control a large fibrous tumor pedicle, but with the principle used in the angiotribe this can be done. I am having such an instrument made. I think with this it will be possible to remove anything from the abdominal cavity, that is fed by a large blood vessel, whether it is in the uterus or not. I have used this method in quite a few operations now, and have had no secondary hæmorrhage.

#### DISCUSSION.

Dr. J. M. FISHER: I certainly think that the use of Dr. Downes' electric hæmostatic forceps for the removal of the appendix is a risky way of dealing with this part of the anatomy, because of the close proximity of the forceps to the intestine. If it cooks the structure, as Dr. Downes claims, and, in this way, converts it into a fibrous cord, it might accidentally and unavoidably do the same thing to the adjacent intestine, and give rise to subsequent ulceration and perforation at this point.

Dr. J. C. DACOSTA: The idea of Dr. Downes' is not entirely a new one. Keith, that famous Scotchman, for years used the cautery to close vessels. Dr. Skene, of Brooklyn, who died about six months ago, came on here and showed his cautery for closing bleeding vessels. It was either before the College of Physicians or the County Medical Society—I think it was before the College of Physicians. The particular one which he showed was for treating growths in the bladder, but he also had one for closing vessels by heat through the abdominal incision, so as to avoid any foreign body inside of the closed abdomen.

Dr. NOBLE: It seems, to me, Mr. President, that a tissue which is left by a cautery is devitalized and, therefore, is a foreign body. I think it is simply a substitute of one foreign body for another. It is one of those questions to be decided on its merits, rather than on any theoretical consideration as to ligatures.

Dr. J. C. DACOSTA: Excuse me, Dr. Noble. Probably I did not make myself clear. The idea of Keith and Skene was not to destroy tissue, but to bring so much heat as to occlude.

Dr. NOBLE: Cauterization devitalizes the tissue, because it is converted into a horn-like substance, and that has to be absorbed by the leucocytes.



Dr. DOWNES: I did not mean to insinuate at all that the electric forceps is original with me. As you say, Keith is more or less responsible in a crude way, and yet not at all the way Skene developed it. Skene was the first to get out a good instrument for compressing and applying heat to the area. His instrument was open to numerous faults, and I have found all the faults in mine that he has in his, and yet mine is much better than his and there are faults yet, but they will be corrected.

There are few men who seem to have an idea of what this method does.

It does not cauterize tissue; if you do that, you have hæmorrhage. You are supposed to desiccate the tissue. Skene never called enough attention to pressure. That is the trouble—those who have used Skene's method had hæmorrhage, because they could not apply pressure. It will require nearly the pressure of an angiotribe. Then, one can rapidly throw enough heat into the blades. Skene had microscopical examinations of the compressed area made, and the tissue seems to be converted into white fibrous tissue, through which you can find no evidence of blood vessels.

As far as removing the appendix, I have done this eight times with electric forceps. If you apply the forceps right, there is no reason why you should have any trouble, and I always put a purse-string suture in removing the appendix above the line of compression and invaginate this small area. But one should not go too near the cæcum. If the forceps are applied properly, the area of heat goes not a sixteenth of an inch beyond the blade.

Official Transactions.

FRANK W. TALLEY, M.D., *Secretary*.

## THE BROOKLYN GYNÆCOLOGICAL SOCIETY.

Stated Meeting, February 1, 1901.

The *President*, JOEL W. HYDE, M.D., in the Chair.

### *A Further Report of a Case of Intraligamentous Cyst with Papilloma of the Right Ovary.*

Dr. JOHN O. POLAK: Two meetings ago I presented a specimen of intraligamentous cyst with papilloma of the right ovary, removed

by supravaginal hysterectomy. At the operation it was my misfortune to remove about one inch of the ureter. The end of the ureter was carried into the vagina at that time because the condition of the patient did not warrant my doing a uretero-ureteral anastomosis. An uneventful recovery followed the primary operation. For four weeks the ureter drained through the vagina. There are some interesting points in the history of this case. The first point relates to the formation of phosphates in the vagina, a complication which was relieved by 2 to 3 per cent. acetic acid douches and swabbing out with a 25 per cent. solution. The vagina lost all its redness and swelling and the phosphatic deposits rapidly cleared up, leaving the vagina in an absolutely normal state.

On the 4th of January the abdomen was reopened; after passing the catheter into the vaginal end of the fistula and into what I supposed to be the ureter, clear urine ran through it. With a catheter in, I thought I would have no difficulty in finding the ureter, but, though the catheter was in the ureter and was manipulated by an assistant, I found it impossible to locate the severed end of the ureter in the exudate present. After about fifty minutes' work, in digging through the exudate, I went back to first principles, finding the ureter where it crosses the iliac artery. About two inches from the bladder one inch of the ureter had been taken out, leaving the ureter about three inches short. I did a uretero-cystotomy, the work being very much facilitated by using the Kelly-Halsted hammer. In estimating whether the ureter would reach the bladder, distension of the bladder with air was of great assistance.

The lower edge of the ureter was carried well within the vesical cavity, and slit in order to prevent possible stenosis.

The only difficulty encountered was in suturing the lower posterior margin of the ureter, and the union at that point could not have been satisfactory because, after the tenth day, there was leakage amounting to ten or twelve ounces a day, through a vaginal drain. This has become less, until there is only one and a half to three ounces through the vagina, and I believe the fistula will entirely close. Up to this time no cystoscopic examination has been made. There was intolerance of the bladder to the retention catheter, and so she had to be catheterized. Voiding the urine voluntarily entailed a degree of muscular action unfavorable to proper union.

If I had another case to do I would not attempt to locate the ureter in such a mass of exudate. It is a simple thing to locate the ureter as it passes over the brim of the pelvis. If the patient will not retain

a retention catheter in the bladder we are justified in making a vesico-vaginal fistula and so establish drainage, which relieves the unrest.

#### DISCUSSION.

Dr. C. R. HYDE: The most interesting point to me was the prevention of the formation of phosphates in the vagina. In all cases where the urine trickles through into the vagina from a ureter that has been implanted or from a vesical fistula there is a marked tendency to the formation of phosphates in the vagina. Dr. Polak's suggestion in reference to the use of acetic acid is very interesting. The usual method of treatment when phosphates have formed is that of Dr. Thomas Addis Emmet, namely, swabbing the vagina with a strong solution of nitrate of silver and, at the same time, giving the patient internally "Water Medicine," a combination of boric acid, benzoic acid and water in certain definite proportions. This makes the urine acid and prevents the formation of the phosphates which only form in an alkaline urine. In all these cases of vesico-vaginal fistula the subsequent prevention of the formation of phosphates was effected by the application of the nitrate of silver and the use of this combination. If Dr. Polak can prevent phosphate forming by the simple application of acetic acid it is interesting. Any one knowing the distress of these patients from this cause will gratefully learn of such a simple therapeutic measure for its prevention.

Dr. J. DUNCAN EMMET: The point made by Dr. Hyde appeals also to me. I have been accustomed to use the medicine described as the "Water Medicine," the object of which is to keep the urine acid, especially after operations upon the bladder for cystitis, in which case the urine is naturally alkaline. One objection to the administration of this medicine is the large doses that are required—half an ounce every three hours—which is rather trying to the stomach, and but few patients can tolerate more than half a dozen doses. Yet without it we find it impossible to render and keep the urine acid in the bladder.

*The Cure of Complete Prolapsus Uteri by Plastic Surgery.*

By J. DUNCAN EMMET, M.D., NEW YORK.

(See page 113.)

#### DISCUSSION.

Dr. CHAS. JEWETT: If my memory serves me this is the first time that a non-member of the society has presented the paper of the

evening, and it is especially fitting that this innovation should have come from so distinguished a guest, one who among many other things has given us the best gynæcological journal extant, and who shares in a name that stands for more important contributions to our knowledge of diseases of women in the last forty or fifty years, and for more valuable measures for their relief, than that of any other gynæcologist, living or dead.

The subject of the paper is one that should appeal to us. In the prevailing passion for abdominal surgery we are apt to lose sight of what is possible by plastic methods. Yet the results of intraperitonæal operations in uterine displacements are not always flattering. With that part of Dr. Emmet's series of operations which is done upon the anterior vaginal wall, I have had no experience. The theory of the combined operations is plain. So long as the uterine axis is held nearly at a right angle with that of the vagina, no prolapse is possible. The practical difficulty, for most patients, is the length of time required.

Emmet's operation on the pelvic floor for restoring the vaginal orifice is the only one of the numerous methods that have been proposed and used which properly restores the integrity of the floor. To him, too, belongs the distinction of first expounding the real nature of the injury.

Recently I have depended wholly upon Kelly's modification of Emmet's method. It is more rapidly performed, the removal of the sutures is easier, and the results are apparently equally good. The technique of the modified operation is so clearly defined that the novice should be able to succeed almost from the first attempt.

The society, I am sure, will join me in formal acknowledgment of the honor Dr. Duncan Emmet has done us, and future discussions, I trust, will profit by the teachings of his instructive paper.

Dr. W. B. CHASE: I appreciate and heartily endorse the sentiments expressed by my distinguished friend. I am carried back some years ago when I had the privilege of witnessing some plastic work done by Dr. Emmet, the writer's eminent father. I am sure that we are all impressed with the statements made to-night. I confess that I have a better appreciation of some of the problems in the matter of plastic work than ever before. Many of our failures have been from a want of a perfect conception of what we desired to accomplish. I am thoroughly in accord with the sentiments expressed. The man who, by plastic work, restores the vaginal outlet and brings the parts to their original condition, is a master of one branch of gynæcology.



I would like to observe Dr. Emmet's work and see him demonstrate the methods suggested here to-night, particularly showing the technique in the restoration of the anterior vaginal wall. If we could restore those parts to the normal condition in the manner that he advocates we would be relieved of the necessity of going into the peritonæal cavity. Instead of suspending the uterus for displacements downwards by intraperitonæal operation, the work would be done *per vaginam*.

I desire to congratulate the society on the opportunity they have had to listen to this surpassingly interesting and instructive paper.

Dr. ERNEST PALMER: During the past few years plastic surgery has not had the prominence that it should have in gynæcology. I agree with the statement of Dr. Duncan Emmet that plastic surgery is really gynæcology. I have had a great deal of experience in plastic work and rather flattered myself that I did it well; but I realized this evening that I was only a novice. I cannot quite comprehend how any organ can be pushed up and held up by an operation below, even after the graphic description Dr. Duncan Emmet has given. Every important organ is suspended, the uterus as well as the liver, pancreas, kidneys, etc. I cannot see how you can lift up the uterus by plastic work without some other aid.

In the treatment of the case preparatory to operation Dr. Emmet has a marvelous control over his patients, in that he can place them in bed and keep them there for weeks. I have estimated that the time taken to do one of these operations is about nine weeks. Now, before nine weeks most patients will tire and go home. If I do an operation on the cervix and say that I want to do a vaginal one later on, the patient will say: "I am going home as soon as I am over this." Almost invariably we do these operations at one sitting, which I know is not good surgery, but we are forced to give the greatest amount of relief, even if only partial, in the least amount of time.

In the treatment of a long subinvolted uterus, the suggestion of Dr. Emmet meets with my approval. Inclination of the bed I have never adopted, but I have used forcible support of the uterus by tamponing, and so throwing the organ well forward, which procedure has always proved satisfactory.

Dr. Emmet has not mentioned the preparatory curettage of the uterus. I believe that by its use absorption is stimulated and involution goes on much more rapidly.

As to the operation upon the cervix, one should bear in mind the cardinal law to remove all scar tissue. Failures, and often aggravation of the condition of the uterus, are due to want of proper dis-

section and enucleation of small portions of cicatricial tissue, and operating before involution has taken place.

Dr. L. G. BALDWIN: In regard to the operation on the cervix I certainly agree with Dr. Palmer. I believe that preliminary curettage is absolutely imperative. It is not at all uncommon to find a uterus with an unhealthy mucous membrane, the so-called endometritis fungosa, where there are present no symptoms to call attention to it, no hæmorrhage, and even a scanty menstruation. To sew up such a cervix is bad surgery and, if done, would interfere with the ultimate results.

With reference to procidentia, I should be inclined to give more weight to the benefits of the operation upon the anterior wall. We certainly see cases of complete procidentia where the posterior wall of the vagina is practically intact and needs no operation. In these cases the operation upon the anterior wall is the all-important one. Whereas Dr. Emmet states that the strength of the anterior wall and the fascia will not keep the uterus up—if the cervix stays back in the hollow of the sacrum the uterus must stay anteverted, and so it cannot be prolapsed.

The operation upon the perinæum I have often done, and I have often stated that if Dr. Emmet could see me doing it he would disown me, but I feel each time I do the operation that I do it better than I did before. The operation is certainly one that cannot be learned in a few weeks or a few months; each time one does it one learns new points and understands more the problems that are to be met. I have deviated from that operation in some cases; I have tried other operations, but I am frank enough to say that I have come back to the method of Dr. Emmet as the only one that gives permanent and satisfactory results.

In this connection, in speaking of plastic surgery in general, I think it is not out of place to emphasize the fact that many general surgeons, who have had no particular education in this direction, have simply sewn together the labia. The idea with them seems to be that they should narrow the introitus, with absolutely no regard to the injury sustained.

Dr. J. O. POLAK: This evening's paper has been a revelation to me in many ways. I believe that I see now where I have failed to cure procidentia, and yet I believe there are some cases that cannot be cured by plastic operation. I think the doctor has a better control of his patients than we have. It seems to me that he allows about fifteen weeks for the cure of a complete procidentia. He allows three

or four weeks before he operates on the cervix; after an interval of several weeks he does an anterior colporrhaphy; then the patient is left alone for two or three weeks, after which a posterior perineoplasty, or posterior colporrhaphy is done, which keeps the patient under care another four weeks. In that way a considerable amount of time is consumed.

There is no question but that the inclined decubitus helps greatly in overcoming subinvolution. I remember a case operated upon three or four months ago, in which there was a prolapse of the bladder, rectum and uterus. Its size was that of a well-developed head, not a foetal head. In that case the mass was irreducible when she entered the hospital, but after keeping her in bed for about a week or ten days, with the foot of the bed raised, with applications of boric acid solution about the tumor, I was able to get it within the vagina. In that case the uterus measured seven and a half inches by the probe. I then did the operation Dr. Emmet condemns. I did a hysterectomy, sewed the vaginal walls to the stumps of the broad ligament, did a colporrhaphy and, subsequently, repaired the perinæum and obtained a good result, which I would not have gotten if the patient had been obliged to remain fifteen or eighteen weeks. In the first place, the uterus was in the posterior cul-de-sac, firmly adherent near the fundus. Now, Dr. Emmet's operation, as I understand it, is only applicable when the uterus is freely movable and when it can be reposed, and when there are no adhesions. Adhesions contra-indicate the operation.

I believe that in those cases where the uterus is extremely long, six or seven inches, we get better and quicker results by a supra-vaginal amputation than if we do a simple plastic operation from below. The long, flabby uterus tends towards retroversion. In old women with complete prolapse, with atrophy of the structures from having the uterus worn outside for a considerable length of time, I believe they are better off with their uteri removed than with them left in.

Dr. G. McNAUGHTON: I think we should take into consideration the occupation of our patients. Those that we see in the general wards of the hospital will not remain in long enough to allow us to follow out the ideas of Dr. Emmet. I am sure that they would be turned out many weeks before they were cured, not by the gynæcologist, but by the hospital authorities. It seems to me that we must give much credit to the position of the patient and the long rest required. From Dr. Duncan Emmet's description I cannot understand

how the taking up of a portion of the anterior wall will push the cervix backwards.

In reference to Dr. Polak's case, it seems to me that the operation of hysterectomy ought to be a very rare one. In the case mentioned by him I would suspect that there was more than subinvolution. I always feel that we should preserve the uterus, which really is the key-stone of the supporting arch. We have prolapse of other organs, frequent derangement of the rectum on account of a rectocele, etc. Amputating the uterus is not going to cure that condition. The suspending operation will suspend other organs than the uterus.

Although it was not within the scope of the paper, I think it is unfortunate that the paper did not consider some means of preventing these conditions.

DR. WILLIAM MADDREN: I should like to ask Dr. Emmet if I understood him to say that, in these cases, he often resorted to amputation of the vaginal portion of the cervix? Is that the rule or the exception? What is his opinion in reference to preliminary curettage? Also, how long it takes to obtain a complete cure?

DR. J. DUNCAN EMMET (*closing the discussion*): I wish to thank all the gentlemen who have spoken to-night, Dr. Jewett and Dr. Chase particularly, for they were the first to express towards me personally their kindly feelings.

I should like to say in reply to Dr. Polak's exception, taken in regard to the statement that the uterus was held up from below, that I think he has misunderstood me. The uterus, in common with other organs, is supported from above. It was Dr. Emmet who first called the attention of the medical profession to that fact. While Thomas spoke of the perinæum as being the "key-stone of the arch," supporting the vagina and the uterus, it was Dr. Emmet who said that this "key-stone" had about as much effect upon the support of the uterus as had the instep of the foot in the support of the trousers above it, which were held up by suspenders. Strictly speaking, the uterus is supported, *not* from above, *not* from the fundus, but by the broad ligaments. The broad ligaments are composed, among other things, of pelvic fascia or reduplications thereof. If the pelvic fascia become relaxed anywhere in the pelvis, every other portion of the pelvic contents feels the effect of this relaxation. The broad ligaments, with a fixed capacity for weight-carrying, cannot do their work if the uterus be subinvolved, heavy with blood; they are not strong enough to resist the forces of gravity. But involution produced by operation upon the cervix makes the uterus lighter, enables the broad ligaments to recover



their resiliency and they again have the power to support the normal uterus. Of course, if the pelvic fascia at the outlet and floor of the pelvis be not subsequently restored, you will soon have conditions as bad as they were before the operation which produced the involution. You will have hyperæmia from prolapse, as in a non-pregnant uterus. The result will be of the same kind. But, if you restore the tension of the pelvic floor at the outlet, you assist in obtaining tension of the fascia all over the pelvis, including the broad ligaments which support the uterus.

Reference has been made in this discussion to the importance of curettage precedent to operation. Dr. Emmet, in thirty years' experience in operating upon lacerated cervixes, has never curetted the uterus except in one or two instances, when it was suggested to him, and occasionally I have done it myself, where there has been a previous pelvic inflammation of very long standing, with marked leucorrhœa and marked subinvolution. I have never, however, seen any especial benefit derived from it. Even where there had been a free discharge from the cervix, with a heavy, flabby uterus, I have always seen involution take place as rapidly without curettage as with it, when the operation upon the cervix was done thoroughly. In about four or five days after this operation a marked discharge from the uterus usually takes place. This is Nature's method of throwing off the superficial, sodden layer of the endometrium. The operation upon the cervix is a sufficient stimulus to involution without curettage. When the discharge from the uterus has ceased, in about a week, the latter has already become smaller, and the endometrium has become healthy. I can see no difference in the time required for involution, whether we curette the uterus or not.

I do not believe in the existence of simple, non-specific endometritis, except in rare conditions. In my own sixteen years' practice in gynæcology, and in the forty-six years' practice of Dr. Emmet, neither of us have ever seen a case of simple endometritis, *i. e.*, one uncomplicated by inflammation outside the uterus and not specific or acutely septic. I think endometritis, with all its qualifying names, is a wrong term. Dr. Welch, of Baltimore, has not found any evidences of inflammation in these so-called cases. They are not entitled to the terminating "itis." They are diseased conditions, it is true, where there may even be a deposit of new cells and a certain amount of congestion, but there is no absolute inflammatory condition present. Endometritis fungosa, for example, I look upon as a condition due to a long-standing interference with the pelvic circulation outside the uterus, which retards the

normal flow of blood to and from this organ. The cause of this interference may be new growths, pelvic cellulitis in the broad ligaments or elsewhere, peritonæal adhesions or any other form of obstruction which, interfering with the normal blood-supply of the uterus, causes a hyperæmic condition, especially of the veins in that organ, with hypertrophic tendency in the membrane.

I think that the effect of prolapse of the anterior wall in this connection is greatly misunderstood. No operation for cystocele can possibly support or even permanently affect the version of the uterus when it is done alone. Such operation is merely an adjunct (a necessary one it is true) to the later operation upon the posterior wall, which is done for the purpose of restoring the integrity and normal tension of the pelvic fascia. I do not believe the fascia which forms the septum between the bladder and vagina is ever torn in childbirth, except in vesico-vaginal fistula. The cystocele which we observe in prolapsus uteri is due to an overstretching of the tissues of the anterior wall, produced by the heavy prolapsed uterus crowding down towards the outlet. As the subinvolted uterus prolapsus it retroverts the fundus as it falls backwards and downwards, pushing the cervix forward. This shortens the normal distance between the uterus and the pubis, and relaxes the normal tension of the anterior fascia. If we remember that the pelvic fascia, in the anterior wall of the vagina, is a reduplication of that which surrounds and supports the cervix at its uterine junction, it is easy to understand how its tension becomes relaxed by any change in the position of the cervix, which shortens the distance of the latter from the pubis. The most that any operation upon the anterior vaginal wall can accomplish is to take in the slack or overstretched tissue and thus restore the tension in that wall long enough to repair the pelvic floor at the vaginal outlet, which restores the capacity of the broad ligaments to support the involuted uterus at its normal plane in the pelvis.

Denudation upon the anterior wall, to be effective in restoring the tension there, must be carried high enough to push back and hold the cervix in its normal position in the hollow of the sacrum. The uterus must, therefore, be completely anteverted before the operation is begun, and the cervix held back by a tenaculum until the first sutures in front of it are secured, but again I must repeat that the condition of anteversion thus secured will not and cannot remain permanent unless the operation upon the posterior wall soon follows, for the uterus will again retrovert and prolapse and the former cystocele will reappear. After the restoration of the integrity of the pelvic fascia on

the floor of the pelvis, the uterus being no longer able to retrovert and to prolapse and thus crowd down upon the anterior wall, the cystocele remains permanently cured.

I would say to Dr. Polak that I have never seen a case of prolapsus uteri that was not curable by plastic surgery. In regard to the length of time required to cure a case it depends upon the conditions present. If a uterus be free from peri-uterine inflammation one may operate upon it at once. After any operation upon the cervix for involution the patient should be kept in bed about three weeks, because it has been proved by experience in many hundreds of cases that it takes about this length of time for involution to have so far advanced that prolapse with hyperæmia shall not take place again as soon as the patient gets upon her feet, for involution will not take place or cannot continue to completion while the return blood-flow of the uterus is obstructed by prolapse of the organ. When the patient has remained several weeks in bed after operation, as I have said, especially where subinvolution has been marked and the uterus large, I usually send her home for two or three months, to take care of herself, until the process of involution of the uterus has become completed.

It is useless to attempt to operate either upon the anterior or posterior wall until the process of involution of the uterus has ended, because the normal tension of the pelvic fascia is regulated only when the uterus is of its normal size. If then the uterus is abnormally large from subinvolution it is impossible to gauge the normal tension of the pelvic fascia, and any operation to this end must necessarily be imperfect and inadequate. For when the process of involution of the uterus is completed and it has become well reduced in size, we find that the tension of the fascia, which we had seemingly restored, is inadequate now by just so much as the difference between the space in the pelvis formerly occupied by the large, heavy uterus and that the lighter subinvolutud one now fills. With far greater force does this mechanical truth apply to the common practice of operating upon not only the cervix but the floor of the pelvis, all at one sitting.

In complete prolapse, after the operation on the cervix has been done and while waiting for involution to be completed, it is often necessary to make the patient wear a ring pessary, so that the pelvic fascia at the vaginal outlet may be put artificially and temporarily on the stretch and the uterus thus supported, until involution is complete.

I have never seen a case of complete prolapsus in private practice. This condition usually occurs in women of insufficient means and re-

peated labors who have employed only midwives. Such patients are willing enough to remain in hospital or to return repeatedly until cured, if the lay authorities of the hospital will permit them.

In reference to the case referred to by Dr. Polak, where he amputated the uterus, adhesions were found at the fundus and I do not think that an organ in that condition was suitable at that time for any plastic operations to cure the prolapse. Had the case been mine I would have cured the peri-uterine inflammation and stretched or caused to be absorbed the detaining peritonæal adhesions and then, when I had accomplished this and the uterus was free to involute, I would begin my plastic work. For by local applications and depletions, especially with glycerine and iodine, which cause contraction of the arterioles and thereby of the blood vessels of the pelvis, I find I can cause absorption of adhesions and of exudates and then, by proper manipulation, can raise and antevert the retroverted and prolapsed uterus.

There is a condition sometimes found which resists all treatment, because it involves a loss of tissue which cannot be restored. I refer to that condition in which the broad ligaments, having become inflamed on their posterior surface and their cellular tissue having been partially absorbed and the rest contracted, the ligament is shorter on its posterior surface than on its anterior, with the necessary result that it drags the uterus permanently out of its normal plane, either depressing or elevating it and usually retroverting it as well. Here nothing can be done by local treatment to restore its normal relations in the pelvis nor can plastic work cause a complete cure. After a time, however, nature generally accepts the new conditions and regulates her blood supply to these.

Official Transactions.

FREDERICK J. SHOOP, *Secretary.*

---



## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*  
DR. T. W. CLEVELAND, DR. G. H. MALLETT, DR. A. D. CHAFFEE.

## GYNÆCOLOGY.

## UNITED STATES.

*Post-operative Treatment of Abdominal Section in Women.*

WALTER B. CHASE (*Jour. Amer. Med. As.*, Nov. 24, 1900) considers first the method of closure of the abdominal wound. For through-and-through suturing silkworm-gut, silk, or silver wire, introduced from within outward, may be used. The sutures should be near enough together to approximate the structures and must not be tied too tightly. In removing them the alternate sutures may be removed first, leaving the others a few days longer for support. For layer suturing chromicised catgut is best. Especial care should be given to the coaptation of the peritonæum and transversalis fascia. Even though layer suturing is employed, it is well to support it with silkworm gut sutures, three-quarters of an inch apart, running down to the peritonæum. The line of incision can be dusted with iodoform, and boric acid gauze may be held in position by strips of adhesive plaster and allowed to remain undisturbed for ten days. Unless there is reason to fear hæmorrhage or undue traction on sutured intra-peritonæal structures, the patients may have as much latitude of position as is conducive to their comfort. Change of position facilitates peristalsis and helps to relieve flatulence.

A high enema of one pint of hot normal-salt solution containing an ounce of whisky may be given just before the close of the operation. The lowering of the head and chest and applications of dry heat should always be maintained. Where shock occurs in spite of the above, transfusion and heart stimulants must be resorted to. The leaving of a pint or quart of hot salt solution in the abdominal cavity will assist in allaying thirst. Where hæmorrhage occurs the vessels must be secured by ligature or compression. If the abdomen has been closed it must be reopened. Do not even stop to remove the patient to the operating table if in bed, for a few minutes' delay may determine the

result. While not all cases require drainage, many do, and care must be exercised that the drainage material be not incarcerated in the peritonæal viscera, and that it be dispensed with as soon as possible. If a large area needs drainage the gauze may be inclosed in a Mikulicz bag, so that a portion may be removed at a time. Rubber tubing may be used later on, where surfaces have to heal by granulation. Through-and-through drainage is recommended in septic cases. Where nausea persists and is due to reversed peristalsis, salines are indicated. From twelve to twenty-four hours after the operation nourishment may be given in teaspoonful doses of hot mutton or chicken broth, increasing the quantity as tolerance is established. The patient should be allowed to urinate if she can; if not, a catheter should be used five hours after the operation. This specimen of urine should be carefully examined. If there is deficiency or suppression of urine, hot poultice to the back, alternated with dry cupping, salines by mouth or by high rectal enema, calomel, the establishment of diaphoresis, and the administration of digitalis, if indicated, will usually restore the secretion.

The pulse must be carefully watched, a rapid rise always suggesting trouble. Closely allied to the causes producing a rapid pulse are those resulting in a rise of temperature. Subnormal temperature occurring soon after an operation indicates either shock or hæmorrhage; sudden rise, if persistent, during the first two days, indicates either sepsis or pulmonary complication. Abdominal effusion gives rise to fever later. Malaria may cause alarming temperatures and weakness in patients with a malarial history. Abdominal distension may give rise to fever; cutaneous sponging and salines afford relief. Coal-tar derivatives to reduce temperature are never admissible. In systemic poisoning the heroic use of alcoholic stimulants, with quinine and heart tonics, offers the best hope. Local accumulations of pus must always be evacuated. Pain usually abates after the first thirty-six hours, and morphia should not be used if it can possibly be avoided;  $\frac{1}{4}$  grain doses of codeine may be used where an anodyne is indicated. Compound spirits of ether will somewhat control pain, while bromide of quinia is both supportive and sedative. Tonics and careful nourishment, either by mouth or rectum, must be used in cases where exhaustion would tend to retard convalescence.

#### *Intestinal Strangulation following Hysteropexy.*

C. P. THOMAS (*Amer. Jour. of Surg. and Gyn.*, December, 1900) says that the operation of ventral fixation of the uterus has been prac-

ticed for about twelve years, and, although it has been predicted that intestinal strangulation from bands of adhesions might occur, only four cases have been reported to the writer's knowledge, therefore the following case is of interest. The patient was suddenly attacked with severe symptoms, and the case was believed to be acute, perforative, gangrenous appendicitis. Immediate operation was demanded, and performed thirty-six hours after the onset of the attack. The abdomen was opened through the right rectus muscle, and the right iliac fossa was found to be filled with a black, perforated loop of intestine. The abdominal cavity was filled with serum and some faecal matter. It was found that the loop of intestine passed below the false utero-peritonæal ligament formed at a previous ventral fixation, and was caught and constricted between the uterus and the pubic bone. The adhesive band had to be severed. About ten inches of the bowel was removed and the ends united with a Murphy button. The rest of the abdominal cavity was free from adhesions and the uterus was in a normal position. Although there was considerable shock the patient made a good recovery.

*A Plea for General Anæsthesia in the Treatment of Mammary Abscess.*

FRANK H. FIELD (*N. Y. Med. Jour.*, December 8, 1900) says that while mammary abscesses are less common than before the days of asepsis and antisepsis, yet they still occur, and too many surgeons are inclined to attempt operation under local anæsthesia only. It is impossible in this way to determine the extent of the suppuration. A case brought to the writer's notice illustrates this, and also the proper method of procedure. A lump had developed in the left breast, to which ichthyol ointment had been applied without affording relief. Then, under cocaine anæsthesia, an incision was made, and the application of linseed poultices ordered. When seen three days later, the left breast was enlarged, indurated, and hyperæmic, there was an indurated spot in the right breast, and the patient's temperature was 102.6°. The patient was anæsthetized, the skin aseptitized, and an incision, radiating from the nipple, was made three-quarters of an inch deep. A dilator was introduced into the wound between the acini, and the index finger introduced into the abscess cavity and passed in all directions, breaking down friable tissues and opening up adjacent and communicating cavities, while counter-openings were made at as many points as necessary to permit of free drainage. Nine

pockets were opened up, and over a quart of pus evacuated. The abscess in the right breast was opened in the same way.

The cavities were irrigated with full strength hydrogen peroxide, followed by a 2-per-cent creolin solution. The cavities were then packed with gauze soaked in the creolin solution. The breasts were then raised toward the clavicle, dressed with gauze and cotton, and a flannel binder was snugly applied. The dressing was kept wet with creolin solution. After twenty-four hours the packing was removed and the cavities irrigated with a 1-to-3 hydrogen peroxide solution, followed by a solution of 1-per-cent. creolin. Drainage was secured by strips of gauze connecting the cavities; this was removed on the third day, and the wet dressing continued. The baby was able to nurse from the right breast in seven days, and from the left in three weeks.

*Cysts in the Ligamentum Latum: Their Kinds and Location.*

BYRON ROBINSON (*N. Y. Med. Jour.*, December 15, 1900) gives the result of the examination of one hundred ligamenta lata as follows:

1. *Supra-oviductal cysts*.—Non-pedunculated, single-chambered cysts, the size of a rice grain, and containing a clear, watery fluid. Found on the proximal or internal surface of the oviduct, covered with a single layer of peritoneum, and mobile with it. Seven per cent. were found in the hundred subjects.

2. *Cysts of the diaphragmatic band*.—A pear shaped cyst on a stalk from one-half to one-twelfth of an inch in length, generally arising from one of the fimbriæ of the pavilion, from the proximal end of the oviduct or peripherally from the proximal anterior surface. Found in 6 per cent.

3. *Cysts of the mesonephritic uriniferous tubules*.—These may reach a large size and become rotated off the pedicle and dislocated to almost any point of the ligamentum—so-called intraligamentous cysts. Found in 38 per cent.

4. *Cysts of the mesosalpinx*.—Located not only in the mesosalpinx, but in the mesometrium. Small, single chambered, and covered by a single layer of endothelium. Often so numerous as to spread over almost the entire mesometrium. Found in 25 per cent.

5. *Hydroparasalpingeal cysts*.—The fimbriated closed end of the accessory oviduct becomes dilated to the size of a pea or bean, contains a straw-colored fluid. Microscopically they are shown to be of pro-nephritic origin. Found in 25 per cent.



6. *Cysts of the mesonephritic duct* (Gärtner's duct or ureter of the second kidney).—Found in the ligamentum latum, myometrium, or vaginal wall, sometimes growing to the size of an orange. Found in 30 per cent.

7. *Lymph cysts*.—Usually bilateral in both ligamenta lata, situated along the large plexuses of blood or lymph vessels, and occurring most frequently where the circulation is disturbed by tumors or disease. Fabricius considers them simply dilated lymph vessels. The wall is very thin and lined with endothelium; they may reach the size of an egg, and are often white; 25 per cent. are found.

8. *Chiari's cysts*.—A cyst in the myosalpinx, formed by invagination of the edosalpinx, due to intense catarrh of the oviducts.

9. *Kobelt's cysts*.—Usually several in number, and arising from the proximal end of the mesonephros. They may or may not be pedunculated, and are of the size of a pea or bean. Found in 45 per cent.

10. *Cysts of the proximal end of the oviduct*.—Rare and somewhat obscure in origin. The pedicle is broad and immediately connected with the oviduct. The cyst reaches the size of an egg and contains a clear, amber fluid. It was found in only two cases.

11. *Cysts under the perisalpinx*.—Due to dislocated cylindrical epithelium of the ovary, and accompanying perisalpingitis, perimetritis, and other subserous inflammations. The cyst is like a tubular gland, varying from the size of a hemp-seed to that of a poppy head.

12. *Cyst fragments of adrenal*.—The adrenal is liable to irregular development and fragmentary dislocations like other organs, associated with the variable Wolffian body. These cysts are situated chiefly along the ligamentum fimbriæ ovaricum blood vessels. The significance of adrenal tissue in the ligamentum latum is the tendency to pathologic changes. These cysts are usually on the posterior blade of the ligamentum latum, while almost all other cysts appeared on the anterior blade.

13. *Cysts of the fimbriæ*.—Located on the mucosa of the fimbriæ, about the size of duck shot, partly transparent, and hard to palpate.

The macroscopic or visible cysts constituted about 90 per cent. of the cysts found in the 100 subjects.

#### *Remarks on Indications for the Radical Therapy of Uterine Fibroids.*

O. THIENHAUS (*N. Y. Med. Jour.*, December 15, 1900) says that as long as uterine fibroids do not give rise to symptoms of any kind in the bearer, they are not subjects for interference. Where, how-

ever, the symptoms demand treatment, the only certain method is the removal of the growth or of the whole uterus by vaginal or abdominal operation. All other methods of treatment, whether medicinal or mechanical, are but symptomatic and palliative. Even when, after the use of drugs, there is a decrease in the size of the fibroid, it is impossible to say that the improvement is the result of the treatment, for fibroids undergo changes without any medication. In respect to the value of ligature of the uterine arteries and other vessels, as advocated by Gottschalk, the conclusion of Boldt seems correct: "The continued observation of patients thus treated showed that the method did not bear the test of time."

Radical operative treatment is absolutely indicated:

1. In cases where carcinomatous or sarcomatous degeneration in the fibroid itself is found or suspected. Rapid and sudden growth of the fibroid, especially at the climacterium, is always to be regarded with suspicion.

2. In cases in which fibroids are complicated with malignant degeneration of the uterus or adnexa.

3. In cases of torsion and rotation of the myomatous uterus, because of the danger of gangrene and septic peritonitis.

4. Cases of fibroids, which reach such a size that they threaten life by pressure on the diaphragm and on other abdominal organs.

5. Cases producing hydro-ureter, hydronephrosis, or even complete anuria, by pressure on the ureters, sometimes with inflammation of the kidneys, pyelonephrosis, formation of the whole kidney into a pus sac, etc. Frequency of micturition is a clinical sign of early affection of the ureters.

6. Cases which, by the location of the origin of the fibroid or by retroflexion of the uterus, produce grave symptoms of incarceration in the small pelvis, such as serious neuralgia, symptoms of severe dysuria, in connection with ischuria paradoxa and coprostasis.

7. All cases in which sudden rapid growth appears.

8. Cases in which suppuration has occurred, or which are gangrenous, or are in a state of becoming gangrenous after partial or total inversion of the uterus.

9. Cases complicated with umbilical hernia, pyosalpinx, ovarian cysts, pelvic cysts, tubo-ovarian abscesses, abscesses in the broad ligament, and phlebitis. Also, when there occurs in the puerperal state or after an abortion, necrosis of the fibroid with suppuration, necrosis with abscesses, or necrosis with beginning elimination of the fibroid.

10. Where excessive menorrhagias and metrorrhagias have rendered the patient weak and anemic.

11. Fibroids, which, at the end of pregnancy and at the beginning of labor, are obstacles to child-bearing.

12. Cases complicated by pregnancy, where the location of the fibroid produces serious symptoms of incarceration, which cannot be overcome by mechanical displacement of the fibroid out of the small pelvis. Where no serious symptoms present, the pregnancy should be allowed to go to term, and a Cæsarian section, with enucleation of the myomatous growth and preservation of the uterus, performed.

Where it is possible, the myomata should be removed without total extirpation of the uterus. The vaginal route is preferable, where possible, as the dangers are less, the convalescence is simpler, there is no visible scar, and no danger of hernia.

#### *The Prevention of Nausea and Vomiting during Anæsthesia.*

LOUIS J. HIRSCHMAN (*N. Y. Med. Jour.*, Dec. 15, 1900) recommends the administration of ten grains of chlorotone to patients, half an hour before an anæsthetic is given. It is better given either in powder form or in a capsule, as the tablets are more slowly absorbed. The patient is rendered tranquil, much less of the anæsthetic is required, and the nausea and vomiting afterwards are almost entirely prevented. In sixty consecutive cases, mostly gynæcological, chlorotone was used in thirty cases. Eighty per cent. of those not receiving the drug suffered more or less severely from nausea and vomiting following the operation, while of the thirty receiving the chlorotone, none were nauseated or required stimulation during anæsthesia, and only three had nausea after the operation. Two of these only vomited twice, and in two of the three the time between the administration of the chlorotone and the anæsthetic was only ten minutes, not giving sufficient time for the chlorotone to exert its beneficial influence.

#### *The Electrical Treatment of Uterine Fibroids.*

GIDEON C. SEGUR (*Phila. Med. Jour.*, Dec. 15, 1900) refers to the use of the galvanic current, which he considers indicated when the symptoms of pain and hæmorrhage, one or both, are pronounced, and which may be used when these are absent, for the purpose of promoting absorption and thus reducing the size of the fibroid. A forty-five celled Leclanche battery, with a cell selector, a switch by which the poles may

be changed, a current controller, a milliamperemeter, a large clay electrode 6x8 inches in size, and a series of uterine electrodes, are all that is needed for this treatment. While the ordinary physician lacks the experience and skill requisite for successful myomectomy or hysterectomy, he can readily place himself in a position to at least cure the symptoms of a large percentage of these cases of uterine fibroid. An antiseptic douche should precede the treatment, and it is well to introduce a speculum and cleanse the vagina and canal with Dobell's solution before introducing the electrode, which must also be aseptic. If the os is very sensitive cocaine may be used. The larger pad is placed over the abdomen and the current gradually increased until there is a sensation of tension within the uterus, and a burning sensation on the abdomen, when a rest can be taken. Forty to sixty milliamperes can usually be borne after tolerance is established. A current, not too strong, sustained for from twenty to thirty minutes, is better than a strong current for a shorter time. In cases where there is any degenerative process present the current does no good except in the way of diagnosis. This treatment, persisted in, will, in nearly every case, relieve the pain and hemorrhage and diminish the size of the tumor. There are no dangers from its carefully conducted use, and operative procedures should be held in abeyance until electricity has been given a fair trial. The writer has not found that puncture was necessary for practical results.

*Separation of the Recti Abdominis Muscles and Stretching of the Linea Alba.*

J. CLARENCE WEBSTER (*Jour. Amer. Med. Asso.*, Dec. 22, 1900) considers the above conditions important but often overlooked factors in the production of abdominal and pelvic disturbances in women. The importance of the integrity of the pelvic floor has been recognized, but the importance of the abdominal wall, anatomically and physiologically, in giving support to the abdominal viscera, has received very little attention until recently. "General weakness" of the abdominal wall, as described in text books, is a rare condition; what is described as such is usually a local disturbance due to separation of the recti muscles and stretching of the linea alba. In slight cases the condition is confined to the region of the umbilicus, but in a severe case the diastasis may extend from the pubes nearly to the ensiform cartilage.

This condition is rarely found except in women who have borne children, and usually increases in successive pregnancies. During



pregnancy the wearing of corsets, a sudden strain or fall, hard work, especially lifting or carrying heavy weights, flatulence and constipation, abundant adipose tissue in the mesentery and omentum and excessive coughing, are the principal causes in producing these conditions. After delivery tight lacing and too early hard work are the chief factors. The inevitable result of these conditions is enteroptosis in different forms and degrees. The visceral displacement most commonly found is prolapse of the right kidney, but abdominal section often reveals descent of the stomach and intestines as well. Occasionally the spleen is prolapsed. The abdominal wall between the recti usually becomes thinned, while the recti are pushed laterally as the linea alba is stretched, and extend in curved line from sternum to pubes. The most common symptoms are weakness and dragging in the abdomen and back, aggravated by standing or exertion, but there may be dyspepsia, nausea, pulsation of the aorta and pain in the iliac or lumbar regions.

The diagnosis may be easily confirmed by placing the patient on her back with the tips of the fingers of the examiner's right hand on the middle line of the abdomen near the navel. Then the left hand grasps the patient's hands and she is instructed to raise her head and chest from the table. As the recti muscles contract they tend to approach the middle line and the extent of their separation is readily noted.

*Treatment.*—Abandonment of the corset and tight bands around the waist, with suspension of the skirts from a loose waist or the shoulders, will relieve all symptoms in many cases. Where the muscles are atrophied massage and moderate gymnastic exercises are recommended. A broad silk-elastic binder, worn continually, gives relief, but this is unpleasantly warm, and expensive as well, as it needs renewing every two or three months. The most satisfactory results, however, follow surgical treatment. An incision is made in the middle abdominal line, dividing the skin and subcutaneous fat. Its length is governed by the extent of the separation of the recti. The umbilicus may be entirely removed if it be deep and difficult to clean easily. When the linea alba is exposed the skin and fat is dissected off on either side to the edge of the rectus. The sheath of each muscle is entered at its inner border, at the lower angle of the wound, and the incision carried along the edge of the muscle, the anterior layer of the sheath being divided where it becomes the stretched linea alba. The muscles are loosened from their internal attachments to the sheath and a series of sutures passed from side to side through each muscle and its anterior sheath layer. Strong linen, prepared by a modification of Gubaroff's method, is used and left

buried. When the sutures are tied the muscles lie in apposition close to the middle line. The fascial edges are brought into apposition by catgut. The skin and superficial fascia are closed. A bulging of the skin along the line of incision, due to reduction of the abdominal walls, often follows, but disappears in time. A strip of skin and fat may be removed from each edge of the wound before closure as a preventive of this. In fifty-one cases the results have been satisfactory. In eight cases nephrorrhaphy was also performed, and in a little more than half an operation for retroversion or prolapse of the uterus was needed. Severe or sudden exertion is prohibited for at least six months, and corsets should be altogether abandoned. Where there was marked enteroptosis an abdominal binder may be worn for six months after the operation.

#### *Fallacies concerning the Menopause.*

GEORGE ERETY SHOEMAKER (*Phila. Med. Jour.*, Jan. 12, 1901) says that this subject at the present day refers not only to imaginary evils attending the menopause, but to the almost fatalistic neglect of real diseases. For a long period in a woman's life, from thirty-five to sixty years of age, "change of life" is popularly supposed to cover every pelvic and abdominal symptom. The menopause is simply a period of readjustment, extending over a period of from one to three years, and should be accompanied by no more serious disorders than vasomotor disturbances and a few functional nerve symptoms.

The most dangerous fallacy is that severe and persistent hæmorrhage is but a symptom of the menopause and that time will cure it. Women too often allow an excessive flow to go on for a long time before becoming sufficiently alarmed to consult a physician. Methodical questions along the following lines must be asked in order to obtain satisfactory information: 1. What was the normal duration, interval and amount of menstruation in early life? 2. When was the normal flow increased? 3. Has the loss of blood been progressively increasing, taking the past few years and months as a measure? 4. Has cessation ever definitely occurred, and then after an interval has the flow been re-established? A normal period should not last more than five days, the interval should not be less than three weeks, and the amount passed daily should not be more than sufficient to moderately wet two to five napkins.

When the vaginal examination is to be made, let it be remembered that a normal cervix does not exclude cancer of the fundus. Three

cases operated upon by the writer during the past year have shown well-marked carcinoma of the fundus uteri, yet the cervix, as seen through the speculum, appeared perfectly healthy.

Another fallacy is that with fibroid tumors of the uterus which are increasing in size or causing disturbances, it is well to wait patiently for the menopause to cure the patient. This idea arose when the mortality after fibroid hysterectomy was over 50 per cent. Now it is less than 6 per cent. in cases without heart or kidney lesions, and when hæmorrhage has not rendered the patient profoundly anæmic. While waiting fifteen or twenty years for the menopause to cure, they are subject to peritonitis, tubal degenerations, pressure on the various organs, degeneration of the heart muscle and invalidism from anæmia. Only small, uncomplicated tumors which do not grow or bleed can safely be left to await the coming of the menopause. Aside from all other dangers arising from fibromas, the possibility of malignant degeneration must always be considered when a policy of delay is advocated.

---

## OBSTETRICS.

### UNITED STATES.

#### *Tubal Gestation with Rupture in a Woman previously operated upon for Tubal Gestation with Missed Labor.*

J. B. LYTH (*The Lancet*, November 17, 1900) says that one of the most frequent causes of sterility in women is an obstruction to the passage of the ovum along the Fallopian tube; where the obstruction is not complete tubal gestation is most likely to occur, for the spermatozoon can pass through an opening too small to allow the passage of an ovum. The existence of long periods of sterility often occurs in connection with tubal pregnancy, and the history of the case reported corresponds in this respect with others noted. The patient's first child was born dead in 1882, in 1892 she had a history of a ten-months' pregnancy. The child apparently died at the ninth month, but labor did not set in, therefore laparotomy was performed and a large full-grown dead child was removed. It lay in a cyst which was an expanded portion of the left broad ligament. She had no further preg-

nancy until the present year, when a series of irregular hæmorrhages viewed in the light of her previous experience led her to consider herself three months pregnant. Six weeks before admission to the hospital she had an attack of abdominal pain with collapse, nausea, and jaundice. Several subsequent attacks of pain followed, and she was exsanguinated, with feeble pulse and subnormal temperature. With stimulation she rallied and examination revealed a tumor on the right. The scar of the old incision was on the left. On opening the abdomen a mass of blood clot with placental tissue and a piece of umbilical cord four inches long came into view. The pregnancy was in the fimbriated end of the right Fallopian tube, and had evidently advanced to the fifth month, but the foetus was not found. The patient recovered.

*Maternal Impressions.*

THOMAS J. T. McHATTIE and T. W. J. ALLEN (*The Lancet*, November 24, 1900) publish three cases bearing on the subject. Case first, when some months advanced in the pregnancy, saw an accident resulting in a gaping wound on the cheek of a child, extending from the angle of the jaw nearly to the mouth. In due time a child was born with a nævus on the cheek corresponding in position and direction to the wound above mentioned. Case second, when three-months' pregnant, had a child run over by a bicycle, fracturing the lower end of the humerus. Six months later a healthy child was born with a so-called an intra-uterine amputation of the left forearm an inch below the elbow. Case third visited a "show" when three weeks' pregnant, and was impressed with the sight of various freaks. From that time until term she worried lest her child should be deformed. At term she was delivered of an anencephalous monster.

*Placenta Prævia.*

H. A. GILTNER (*Wisconsin Med. Recorder*, Dec., 1900) was called at midnight to attend a patient in labor. The os was found but slightly dilated and the foetus high in the pelvis. A little clotted blood had been passed in the evening, and soon after the physician's arrival about a pint of blood clot was passed. The pains ceased in about two hours, and not having returned five hours later, a hypodermic of morphia was given and the writer returned to his office. At noon he was summoned and found the child delivered with the placenta attached. There had been no hæmorrhage and the uterus was well contracted. The



peculiar feature of the case was that the placenta was expelled twenty minutes before the birth of the child. The child was dead, with the cord wrapped three times around the neck. Placenta prævia was suspected when the first hæmorrhage took place, but as no further bleeding occurred during the succeeding seven hours, it was thought probable that there was no danger of such an accident, and that the patient was not really in labor, it being not full time. The patient made an uninterrupted recovery.

### *Cephalic Version.*

F. HORN (*Obstetrics*, December, 1900) says that for cephalic version in transverse positions the following conditions should be present: (1) The head must be movable and lower than the breech. (2) An intact or very recently ruptured amniotic sac. (3) Good contractions, although some writers consider this point unnecessary, as the manipulations stimulate the pains. (4) A pelvis normal or very slightly contracted. (5) Dilated cervix. (6) Absence of prolapse of cord or arm, although Hohl thinks cephalic version permissible with the prolapse of an arm if the foetal head is small and the pelvis roomy. (7) The lack of imperative indications for speedy delivery, *e.g.*, placenta prævia. (8) A living and viable fœtus, since the preservation of the child is the main object of this operation.

Cephalic version may be accomplished by external manipulation alone; internal manipulation alone, or by the combination of the two procedures. The more skillful the accoucheur the more will he employ the external hand, the use of which is without danger. During pregnancy external cephalic version may be attempted to bring the fœtus to a normal position, using an anæsthetic if necessary. As there is a tendency to reassume the old position, pads, bandaging, position and manual fixation may be used after version to maintain the corrected position. Even if unsuccessful, external version can do no harm. Where this method fails after a fair trial, cephalic version by the combined method gives better results for both mother and child than any other method. Even if the application of the forceps becomes necessary after the head has entered the pelvis, the danger of the forceps is less than that of breech presentation, with the unavoidable asphyxia that accompanies it. This is especially true where the child is premature.

The difficulty in causing fixation of the head is not usually insurmountable, although it makes a demand upon the patience and endurance of the operator. In the induction of labor haste is out of the

question, and cephalic version gives better results than podalic, although the greater rapidity of the latter has popularized it to an unfortunate extent. A detailed account of nine cases observed by the writer is given.

*The Treatment of Placenta Prævia by Cæsarean Section, with Report of a Successful Case.*

FRANCIS D. DONOGHUE (*Boston Med. and Surg. Jour.*, Dec. 6, 1900) says that the treatment of placenta prævia in the past has not sufficiently taken into consideration the life of the child, and while craniotomy is no longer upheld by many, there is not the same feeling about the induction of premature labor or severe operative delivery, which no less surely deprives the child of life. The following methods of treatment of placenta prævia are most in vogue at present: (1) Induction of premature labor; (2) rupture of membranes followed by natural delivery or delivery by forceps; (3) manual dilatation of os with delivery by version; (4) Cæsarean section.

The first is not justified before the seventh month, although its advocates advise it as soon as the diagnosis of placenta prævia is made. Induced labor, even without placenta prævia, shows an immediate foetal mortality of  $33\frac{1}{3}$  per cent., with an ultimate mortality of from 50 to 75 per cent. The second method is useful only in cases of lateral or marginal placenta, where good pains are present and the os dilated or dilating; but it is not recommended where haste is indicated or in cases of complete prævia. The third method is most frequently practiced by American and English obstetricians, and while the maternal mortality has been lowered to 12 per cent. in the hands of the best operators, it has been at the expense of the foetus. Besides the high foetal mortality other objections to version are: (1) It is not always easy to perform and does not stop hæmorrhage; (2) in multiparæ the difficulties are increased by the larger size of the foetus and the lessened intensity of contractions of the uterine and abdominal walls; (3) the foetus is already shocked by placental hæmorrhage and the manipulation of the cord necessary in version increases the shock; (4) it is often necessary to perforate the aftercoming head.

Cæsarean section is indicated in: (1) cases of complete prævia; (2) cases of prævia in primiparæ when signs of foetal or maternal exhaustion are evident; (3) in conditions of rigid os; (4) where there is a history of previous operative delivery; (5) in transverse positions and where the cord is prolapsed and not easily returnable. Cæsarean

section is the easiest of celiotomies and in nearly every fair-sized community an operator capable of performing it in an aseptic and antiseptic manner can be found, while an obstetrician with the needed experience in performing version is not readily obtainable. A second Cæsarean section on the same woman is easier than the first; in cases where the uterine scar has adhered to the abdominal at the time of the first operation, subsequent operations are really extra peritoneal. The case reported is as follows: The patient, 40 years of age, had previously been delivered of one child by forceps. There had been no unusual symptoms during this second pregnancy until a week before the expected date of delivery, when she had a sudden, profuse hæmorrhage, lasting for two hours and unaccompanied by pain. Six days later flowing began in the morning, was not alarming, and a doctor did not see her until evening, when a diagnosis of placenta prævia was made. The symptoms were not urgent and the patient was left until the next morning. At noon the mother's pulse was 110, temperature 99° and the foetal heart 130. Hæmorrhage not profuse. At 5 P. M. the patient was first seen by the writer, who found her in collapse from a sudden profuse hæmorrhage. The clots which filled the vagina were removed and a hot bichloride douche given. The os was partly dilated, covered by placental tissue and very rigid. Labor pains were present. As active hæmorrhage continued and the patient's pulse was 140, immediate operation was advised. The house was a one story house of three or four rooms and an ordinary country nurse was in attendance. The kitchen table, pieced out with a light stand, furnished the operating table, and the instruments were sterilized in the wash boiler. The field of operation, after having been rendered aseptic in the usual manner, was surrounded by towels wet in a  $\frac{1}{500}$  corrosive-sublimate solution. The abdominal wall was incised and the uterus pulled through and packed around with gauze, while a rubber tube was passed around the broad ligaments, tight enough to control any hæmorrhage. The uterus was opened by an abdominal incision, the membranes ruptured, and the child's head presenting, it was delivered in that way. As the cord was pulsating feebly it was clamped and cut and the child was soon crying vigorously. The rubber tube was removed and contraction of the uterus followed. As there was no hæmorrhage the placenta was allowed to separate in the usual way and was delivered in ten minutes through the uterine incision. There was very slight oozing from the placental site directly over the os. The wounds in the uterus and abdomen were closed. After-treatment consisted of corrosive-sublimate douches until the tenth day, when a slight odor of the lochia caused

a change to sulphonaphthol douches. The patient sat up on the twelfth day and left her bed on the twenty-first day. Both mother and child are well at present writing, two months later.

*Does the Thyroid Gland influence Conception?*

E. C. RANKIN (*Western Med. Review*, Dec. 15, 1900) reports two cases in which thyroid gland seemed to have a decided influence upon the organs of reproduction.

*Case I.*—A woman of 40, mother of two children, the youngest 16 years of age. She was placed on  $2\frac{1}{2}$  grain capsules of desiccated thyroids, three times a day, for exophthalmic goitre. Marked improvement in her general condition followed, although there was no perceptible diminution of the goitre. Three months after beginning treatment her menstruation did not appear, but as she had been irregular nothing was thought of it, and pregnancy was not suspected until she miscarried, four months later. This was due to general lack of vitality on her part.

*Case II.*—A woman of 32, mother of one child 11 years old. Had suffered from exophthalmic goitre for several years before coming under the writer's care. Three grains of thyroid, three times a day, was ordered, and improvement was soon evident. Three months later she became pregnant and was delivered at full term of a healthy child.

If the seeming connection between the administration of the thyroid capsules and the subsequent pregnancies is correct, it might be used with advantage in certain cases of sterility.

*Hyalin Casts present in Puerperal Eclampsia.*

L. NAPOLEON BOSTON (*Phila. Med. Jour.*, Dec. 15, 1900) says that the probable reason for the statement that no lesion of the kidney is present in eclampsia is, that we overlook certain casts by using the power of illumination usually employed for the study of casts. The most common form of casts present is in its refractive power and transparency similar to the hyalin casts found in chronic interstitial nephritis, but the morphology is widely different. These casts are usually long and broad, with highly refractile centers and a faint whitish outline or border, just inside of which is seen a narrow band of a dull pearl tint. They are broken squarely or obliquely at one or both ends, while one extremity is often markedly tortuous, sometimes tapering



slightly. With these casts may coexist a few granular casts, the finding of which leads to the overlooking of the others and the erroneous conclusion that but few casts are present. A moderate change in the amount of light will, with careful focus, show the field filled with the above-described variety. Under a low-power lens (2-3) many of these casts may be seen. With a higher power the definition is not distinct without the use of a condenser and an iris diaphragm. Tapeworm form casts, resembling the so-called amyloid cast, are often present in the urine of eclamptic patients. A peculiarity of the casts found in the urine of such patients is that they are easily preserved by adding a few drops of chloroform or a weak solution of bichloride of mercury to the urine; this usually will cause casts to darken and later on disintegrate; but these varieties of casts show little or no change for several weeks. It is singular that the urine may be free from casts in from twenty-four to seventy-two hours after delivery. In all fatal cases recorded the casts have remained. Their disappearance is, therefore, a most favorable symptom.

*The Value of the Hot-water Immersion Bath in the Treatment of, threatening Puerperal Eclampsia.*

CHARLES M. GREEN (*Boston Med. and Surg. Jour.*, Dec. 20, 1900) says that the necessity for the supervision of the pregnant woman's daily life and general health by the physician is not even now generally appreciated. But without discussing the etiology or prophylaxis of eclampsia the treatment of the patient when alarming symptoms present may be given briefly: Rest in bed, bromide and chloral to restore the equilibrium of the nervous system, a milk diet, mild diuretics, such as bitartrate or acetate of potassium or the old Basham mixture, stimulation of the liver, an abundance of fresh air, nitroglycerin and in some cases digitalis, and stimulation of the skin function by hot-air baths, the hot wet pack, or hot-water immersion. The hot-air bath and hot wet pack may be best used in the presence of actual eclampsia, chiefly because the patient is often comatose and helpless and adequate assistance is often wanting. But when circumstances permit its use the hot-water immersion bath more satisfactorily meets the indications, as it not only produces profuse diaphoresis and reduces blood tension, but also acts as a sedative to the nervous system. If the heart is weak brandy may be given before immersion. The water should be as hot as can be borne and the patient should remain in it until profuse perspiration of the face appears. Friction with a flesh brush may be em-

ployed when the skin is dirty, as is often seen in hospital practice. After removal from the bath the patient should be rolled in a blanket and placed in a warm bed. The patient should be urged to drink freely of water if conscious, and with comatose patients rectal injections or intravenous infusions of normal salt solution must be used to compensate for the profuse sweating. Unless the symptoms are very urgent this method should not be employed unless the foetus is viable, as it is a powerful agent in the induction of labor. The free use of chloral may inhibit this action, but it cannot be depended upon. Three cases are reported in which this method of treatment was employed with the best results.

*Management of Pregnancy and Labor complicated by Cardiac Disease.*

WILLIAM GILLESPIE (*Cincinnati Lancet-Clinic*, Jan. 5, 1901) says that while recognizing the fact that maternity is not always injurious to patients with diseased hearts, it must be remembered that pregnancy is apt to relight an old endo-cardial or pericardial inflammation, and the more recent the original attack the more likely is this to occur. The danger of pregnancy increases in proportion to the rapidity with which one pregnancy follows another.

When a valvular lesion is uncompensated a woman will usually menstruate excessively until the development of cardiac cachexia, and while liable to conceive is much more liable to early abortion, probably because of the extravasation of blood between the ovum and uterine wall. Some of the so-called cases of menstruation during pregnancy are due to this cause. After the patient becomes cachectic the probability of pregnancy occurring is lessened, but the dangers of that condition are vastly increased. Failure of compensation during the first half of pregnancy rarely occurs unless that condition existed before pregnancy.

The character or intensity of the heart murmur is of small significance, the gravity of the case depending upon the condition of the heart muscle. In the early months of pregnancy dilatation of the right heart and pulsation of the veins of the neck should be considered a positive indication for terminating the pregnancy. The method of inducing delivery should be rapid and aseptic. In another class of cases loss of compensation does not occur until the fifth month. The interests of the mother would demand interference, but the interests of the child are also to be considered. The patient rarely goes to term; but if by cardiac tonics the balance of circulation can be restored, it is well

to wait until the child is viable. If, however, the heart does not improve, nothing is to be gained by waiting, as the child's chances of life are not increased and the mother's are lessened. In the use of heart tonics strophanthus is preferable to digitalis, as it does not contract the arterioles and is not cumulative to the same extent as digitalis. It is therefore safer to push it until the desired effect is produced. Strychnine is always to be used. The bowels must be kept open, the return circulation assisted by friction of the lower limbs and absolute rest insisted upon. When the heart fails to improve, passive hyperæmia of the liver appears, digestion is disturbed and the urine shows casts and albumin. The time for medical treatment is past and labor must be induced. The gravity of the severe muscular effort attendant upon labor in a case where cardiac dilatation exists must be appreciated, and while there is danger from the administration of an anæsthetic, it is the lesser of two evils, and there are some conditions present which render it safer than it would be in cardiac dilatation under other circumstances. The direct paralyzing effect of the drug upon the heart is reduced to the minimum by its administration with a mask and dropper. If anæsthesia to a surgical degree is required ether is better than chloroform. Where the cervix is dilatable, the pelvis roomy and perinæum relaxed, manual dilatation and extraction by the feet is best for both mother and child. Where the cervix is firm time is gained by the use of Godell's dilator and Barnes' bags. Where haste is indicated the external os may be incised if the internal os has disappeared.

If there has been acute endocarditis during pregnancy prompt improvement may be expected after labor; but if there is cardiac dilatation from overwork of a heart long diseased the prognosis for the puerperium must be guarded. Death may result from thrombosis, septic endocarditis, rapid cardiac dilatation and hepatic congestion or fatal cardiac collapse from septic infection of the pelvic organs. In some obscure cases the only explanation seems to be hyperinvolution of the heart muscle.

It is never safe to wait for development of symptoms on the part of the heart; persistent treatment medically and the use of the forceps as soon as possible if the child is living and viable are always indicated. Where the child is dead version is preferable.

#### *Re-expansion of the Uterus in Labor.*

D. BENJAMIN (*Phila. Med. Jour.*, Jan. 12, 1901) believes that the

parturient womb during any stage of labor and for a few hours afterwards can be expanded to about the same size as it was when labor began. An appreciation of this fact will introduce a number of valuable procedures based upon it in the treatment of malpositions and complications, thus frequently avoiding craniotomy or Cæsarean section. The method pursued by the writer is as follows: The patient is anæsthetized, the hips brought to the edge of the bed and elevated well above the level of the patient's shoulders, and an assistant placed in charge of each leg. The operator's arm and hand having been sterilized and covered with sterilized cosmolin, firm pressure is made with the palmar surface of the hand against the presenting portion of the head in the direction of that portion of the axis of the pelvis occupied by the head. By firm pressure between the pains and holding it during the pains it will be found that a little is gained with each pain in returning the head by the same route that it came. The process is often long and tiresome, and propping the elbow against the knee or changing hands may be necessary. The womb will not only begin to elongate upwards, but will seem to relax its efforts at expulsion. After the head is returned above the superior strait the hand may be passed around the head, ascertaining the exact position, removing the cord from the child's neck if necessary, and, if desired to turn, the child's head can be grasped and turned in the desired position, assisted by the other hand on the outside of the patient's abdomen. In face presentations with the chin posterior, unless the child is unusually small and the soft parts greatly relaxed the best authorities consider some operative procedure necessary, often sacrificing the child's life in the interest of the mother where Cæsarean section is not performed. The method described above offers a more satisfactory means of procedure in these cases. A case in illustration is given. The patient, a multiparæ, had been in labor three days. Attempts at rotation and delivery with forceps under ether had been made, but were unavailing. The membranes had been ruptured for twenty-four hours. The woman was in fairly good general condition, and pains still continued. The soft parts were swollen and congested, and the child's head was firmly impacted in the pelvis, the chin in the hollow of the sacrum. The child was large and still living. In one hour, by the method above described, the writer had raised the chin out of the pelvis, flexed it on the sternum, and delivered with ease a living ten pound boy. Both mother and child did well.



## GREAT BRITAIN.

*A Successful Case of Porro's Operation for Ruptured Uterus, complicated by a Large Myoma and a Five-and-a-Half Months' Pregnancy.*

GEORGE COLE-BAKER (*The Dublin Jour. of Med. Science*, December, 1900) was called in consultation to see a woman, five and a half months pregnant, who was seized with vomiting and cramping pains in the stomach and abdomen. The attending physician could not find the cervix uteri and it was with much difficulty that it was located by the writer two inches above the upper border of the symphysis pubis. A tense elastic tumor filled the true pelvis and a diagnosis of incarcerated retroverted pregnant uterus was made. Attempts at reposition under chloroform were unsuccessful, and the patient was removed to the hospital, where under profound anæsthesia the uterus slipped up into the proper position during examination. The uterus felt extremely like a uterus bicornis, the right horn being larger and harder. The os was patulous and partly dilated, but no uterine contractions were present. The patient was quite comfortable until three days later, when severe pain and tenderness in the abdomen began, and on the following day the temperature rose to  $103.4^{\circ}$ . It was decided that the supposed right cornu was myoma which had become bruised and had set up a local peritonitis. This condition continued, but no signs of labor were present until, with almost no warning, the patient was delivered on the evening of the following day of a fœtus with membranes intact. The temperature remained high, with a more rapid pulse and several slight rigors. The patient was drowsy, but when roused said she felt perfectly well and free from pain. On the third day after delivery her temperature was  $105^{\circ}$ , the pulse too rapid to count, and the patient delirious and apparently moribund. An abdominal hysterectomy by Porro's extra-peritonæal method was performed, together with the removal of the appendages. Although the operation lasted an hour and a half the patient's condition at the end was decidedly better than at the beginning. The temperature fell to  $97^{\circ}$  in four hours. Convalescence was speedy and uninterrupted except for an attack of diarrhœa.

An examination of the uterus revealed a myoma the size of a child's head, which had ruptured the uterus at the fundus. There had been no hæmorrhage into the abdominal cavity, and on incising the myoma no suppuration or necrotic change was evident. The lochia was entirely free from odor, and the rise of temperature is difficult to ac-

count for, as is the rapid, painless delivery six days after the replacement of the uterus. There were no adhesions of the tumor or uterus to the intestines.

*Difficulties in Labor Due to the Shoulders.*

R. G. M'KERRON (*Scottish Med. and Surg. Jour.*, December, 1900) says that difficulty in the delivery of the shoulders may be due to a narrowing of the maternal pelvis or excessive development of the child. Arrest usually first occurs when the sub-occipito-bregmatic diameter has just passed the vulvar opening. Only one other condition gives rise to arrest at this stage, *viz.*, relative or absolute shortness of the umbilical cord.

Where the obstruction occurs at the brim, pressing the anterior shoulder backwards from above the symphysis pubes, combined with the traction on the neck—directed well back on the perinæum—will succeed in easier cases. If this fails the index finger hooked into the axilla may succeed in pulling the shoulder through; or a blunt hook may be substituted for the finger. Traction on the neck and pressure on the fundus must be used at the same time. One or both arms may be brought down in other cases. After getting one arm down, if the child be dead, decapitation will facilitate delivery. Bonnaire suggests the division of one or both clavicles with sharp scissors. After the shoulders pass the brim and become impacted in the pelvis, if the child is living an attempt should be made to bring the shoulder down under the pubic arch by traction with the finger in the axilla. If this fails, the opposite procedure may be tried, pushing up the anterior shoulder and pulling down the posterior. Where the child is dead the clavicles may be divided. Bonnaire thinks this operation might be performed on the living child without fatal results, as in none of his experimental operations were the sub-clavian vessels or nerves injured.

Since the most common cause of excessive size of the fœtus is abnormal prolongation of pregnancy, it would seem advisable to allow no woman to exceed the normal duration of pregnancy by more than two weeks. Induction of labor very soon after it is seen that full term has been reached would often save the child's life and prevent a prolonged and difficult labor.

Two cases are reported. In the first, delivery was effected by traction and pressure from above, as before described. The child was still born and weighed twelve and a half pounds. In the second case, the woman had gone fully three weeks beyond term, and fœtal move-

ments had not been felt for several days. Traction and pressure failing to accomplish the delivery of the shoulders, an arm was brought down with the blunt hook, then decapitation was performed, and before the body could be delivered it was found necessary to eviscerate first the thorax and then the abdomen. The child was very large, but there was an œdematous, almost indurated, condition of the tissues as well. Probably the thrombotic changes in the placenta preceding labor had advanced and interfered with the circulation.

*A Case of Complete Transverse Septum of the Vagina impeding Delivery; Urethral Coitus.*

E. RUMLEY-DAWSON (*The Lancet*, Dec. 8, 1900) was called to see a primipara in labor at full term. In spite of strong pains no progress was made and the midwife in attendance summoned the writer. The patient gave a history of regular normal menstruation up to the time of pregnancy. On examining the patient in the left lateral position, the index finger unwittingly and without causing pain passed directly into the bladder. Ocular examination showed that the urethral orifice was much dilated and the vaginal orifice small. One inch within the vagina was a thick, transverse septum, bulging with each pain. The cervix could not be felt. There was no opening in the septum, which did not occupy the site of the hymen. The septum was incised and the opening enlarged with the fingers. The cervix was found completely dilated, and a child was soon and naturally delivered. The patient said that when first married intercourse had been difficult, and after a few months became impossible; then, later, it was found possible, but painful. The pain gradually subsided. There had been no incontinence of urine.

There was no doubt that the septum was congenital, and that previous to and soon after marriage there had been an opening sufficient to allow menstruation and impregnation. Coitus was probably at first in the vagina, when probably the opening in the septum became torn and the freshened edges, in healing, united completely, shutting off the upper part of the vagina and the impregnated uterus. Urethral coitus had followed quite unknown to the woman, who was not aware of any abnormality in her genitals.

*A Case of Conglutinatio et Atresia Orificii Uteri during Parturition.*

P. G. EDGAR (*British Med. Jour.*, Dec. 8, 1900), surgeon at Perak,

was called to see a young Chinese woman who had been in labor three days, attended by Malay and Siamese midwives. She had borne three children previously after normal deliveries. Uterine contractions were strong, the head fixed and the foetal heart audible on the left side. With each pain the head descended, pushing the anterior vaginal wall forward and downward, rendering it so tense that at first it was mistaken for the distended membranes. The os was represented by a narrow groove facing the hollow of the sacrum. Only the tip of the finger could be inserted in this groove, but after some manipulation the opening was enlarged by tearing away adherent tissue, by which agglutination of the margins of the os had taken place. After this the os dilated rapidly, and the child was delivered in two hours. It had evidently been subjected to great pressure, as a large quantity of meconium came away soon after the membranes had ruptured.

*The Essential Factor in the Causation of Sex.*

E. RUMLEY DAWSON (*The Lancet*, Dec. 15, 1900) presented his theory on this subject before the London Obstetrical Society. Since the fertilization of the ovum comes from the secretion of both testicles, the male parent cannot influence the sex of the child. But the ovaries discharge ova independently of each other, probably working alternately. From the history of a number of cases in which one ovary had been removed and pregnancy had subsequently occurred, it was found in every instance that where the right ovary remained the result of conception was a male child; where the left ovary was retained, a female child resulted. The history of several cases of tubal pregnancy corroborated this theory, a male foetus being found invariably in the right tube, and the corpus luteum in the right ovary. Cases where tubal or cornual pregnancy occurred on the opposite side to the corpus-luteum-bearing ovary must be explained by one of two theories: (1) the grasping by the tube of one side of the ovary of the opposite side; or (2) the transmigration of ova. Twins of opposite sexes must be accounted for by considering that ovulation occurred from both ovaries at about the same time, while twins of the same sex were from two ova from the same ovary. Unilateral sterility probably accounts for the birth of children of the same sex in successive pregnancies. In two cases where male children had been born after the removal of the right ovary, it was subsequently found that a portion of the right ovary had been left behind. In one case both ovaries



were supposed to have been removed, yet two male children were afterward born.

*Contribution to the Diagnosis and Treatment of Retroflexion of the Gravid Uterus.*

W. J. SINCLAIR (*The Lancet*, Dec. 15, 1900) read a paper on the above subject before the Obstetrical Society of London, in which he pointed out that the diagnosis was not so difficult a matter as some writers seemed to think. The striking constant feature is irritability of the bladder and more or less retention of urine. There is too much of a tendency to resort to operative procedures in these cases. The special method of treatment which the writer advocates is extremely simple. After the bowels and bladder are thoroughly emptied a watch-spring pessary is introduced and the patient instructed to lie on her side, as far over on the face as possible, and in most cases the action of the pessary had, in a few hours, restored the uterus to its normal position. Fifteen consecutive cases were reported, in all of which this treatment had been successful. A case of a fibroid tumor attached to the fundus uteri, which had fallen back into the cul-de-sac, was also mentioned. With the watch-spring pessary the tumor was raised into the abdominal cavity.

*Cleidotomy: An Operation Accessory to Craniotomy or Basilysis.*

J. W. BALLANTYNE (*Scottish Med. and Surg. Jour.*, January, 1901) says that the indications for cleidotomy are: (1) broad-shouldered foetus, (2) contracted pelvis, (3) combination of the two foregoing conditions, although neither excessive; (4) impacted shoulders in breech case; (5) danger from eclampsia, threatened uterine rupture, etc., demanding rapid delivery. There is no case recorded of the operation having been performed upon a living child. The method is as follows: The index and middle fingers of the left hand are passed up along the anterior aspect of the infant (whose head or breech has already been born) until the prominent ridge of the clavicle of one side is felt: then a pair of long, strong, straight scissors, held in the right hand, is pushed up until it touches the clavicle at the middle or near the sternal end. The blades are then slightly separated under the guidance of the fingers of the left hand, and the bone with the skin covering it is snipped through, and the operation repeated upon the other clavicle, if necessary. In most cases of disproportion be-

tween the foetal and maternal parts, this operation will need to be preceded by craniotomy or basilysis. Cleidotomy is preferable to cleidotripsy and cleidorrhæxis, in being easier, more rapid, and more certain. Supra-acromiotomy must be employed where the clavicles are inaccessible. The operation will probably be limited largely to cases where the foetus is known to be dead, as the improved technique of Cæsarean section makes that the operation of choice where the child is alive. Under certain rarely occurring circumstances there seems no reason why cleidotomy should not be performed upon the living foetus; fractures of the clavicle as the result of labor or obstetric interference heal with care, and if the skin wound were kept aseptic there might be good results even after cleidotomy on the living child.

---

## PÆDIATRICS.

### UNITED STATES.

#### *Gastric Fever affecting Children.*

G. T. McCULLOUGH (*Denver Med. Times*, November, 1900) says that some authorities consider cases which might be included under this head as either abortive typhoid or malarial fever, but in many respects it differs from typhoid, and the fact that it is more common in mountainous districts than in lower altitudes distinguishes it from the malarial fevers. It prevails in localities where there is a marked difference between the midday and midnight temperatures and is more common in the spring and fall. A history of sudden chilling or cooling of the body can be obtained in nearly every case.

*Symptoms.* The onset is comparatively sudden. There is pain at the pit of the stomach, headache, extreme foulness of the breath, the tongue is heavily coated in the middle and has a strawberry appearance around the edges, the pulse is rapid, the temperature rises rapidly to 104° or 105° F., there is constipation, dyspnœa, sometimes nausea and vomiting. A sympathetic cough is often present. The urine is scanty and high colored. The attacks last from three to twelve days. The range of temperature differs from typhoid, the temperature varying from normal to 104° F. and back again to normal. The localized pain and

tenderness over the stomach distinguish it from appendicitis. The prognosis is usually favorable. Occasionally enterocolitis follows and terminates fatally.

*Treatment.* Two or three tablets, half an hour apart, of soda and calomel, each one grain, are given. If this fails to act in six hours the attendant is instructed to knead the bowels with the hands lubricated with warm castor oil mixed with one-fourth part of whiskey. Where vomiting is persistent, a mild mustard plaster over the stomach and the administration of small bits of ice will often give relief. For the headache and fever fifteen drops of the following prescription are given every three hours to a child six years old.

℞ Tinct. aconiti rad. .... ℥xxx  
Tinct. gelsemii ..... ʒi  
Syr. ipecac ..... ʒiii  
Aq. cinnamon. .... q. s. ad. ʒi.

For the pain in the stomach half a teaspoonful of the following prescription may be given every half hour until relief is afforded, and after that every three hours:

℞ Spts. chloroformi. .... ʒi  
Bismuthi subnit. .... ʒiiss  
Morph. sulph. .... gr. i  
Elix. lactopep. .... ʒi  
Aq. menth. Pip. .... q. s. ad ʒii.

Dry heat, in the form of a hot water or hot salt bag will aid in relieving the pain. After the temperature is under control the disagreeable taste in the mouth and the fetor of the breath may be removed by a remedy containing four drops each of tincture of iron and dilute phosphoric acid with half a teaspoonful of syrup of lemon, given three times a day in a wineglass of water. This also acts as a systemic tonic and may be continued for two weeks.

#### *Carbonic Acid Gas per Rectum in Pertussis.*

C. LEGRAND KERR (*Pediatrics*, Nov. 15, 1900) recommends this method, especially where there are existing complications or in cases of drug intolerance. While the duration of the disease has not been influenced the frequency and severity of the spasms were diminished in every case. In one case the number of paroxysms was reduced from forty-three per day to six or eight, in another from twenty-five to eight. The only untoward effect was a tendency to diarrhœa in three cases, due probably to mechanical irritation. In all but one case there

was marked flushing of the entire skin, lasting about ten minutes. The technique was as follows:

A wide-mouthed bottle holding one pint was provided with a tight cork through which a glass tube passed, reaching half way to the bottom of the bottle. A flexible tube was attached to the external end of the glass tube and fitted with a rectal nozzle at its free end. One-third of a pint of water, containing 6 drams of bicarbonate of soda, is placed in the bottle, and to this 4 drams of tartaric acid crystals is added. As this dissolves slowly the gas is liberated at the proper rapidity for administration. The rectal tube is inserted and the gas administered for from five to ten minutes. Two or three treatments, preferably between meals, are enough for one day.

The good effect is undoubtedly the result of the increased quantity of oxygen which reaches the air vesicles, there to be exchanged for the larger amount of carbonic acid contained in the blood in consequence of absorption from the rectum.

#### *A Case of Cretinism and Thyroid Extract.*

J. B. McGEE (*The Cleveland Med. Gaz.*, December, 1900) says that this disease is relatively rare in this country, and the case reported is of additional interest, as the condition followed an attack of typhoid fever when the child was three years old. Previous to that illness the child had been large, well-developed and normal in all respects.

Fagge was the first to report cases of cretinism following acute disease, ascribing it to atrophy of the thyroid gland caused by the fever.

This child was not seen after the attack of typhoid for four years, when it was found that she had not grown any since her illness. The hair was dry and rough, the skin coarse, lips protruding, tongue enlarged, abdomen protuberant and mental condition dull and apathetic. A five grain tablet of thyroid extract, containing two grains of the desiccated gland, was ordered to be given three time a day, but this caused headache and general distress, although no urticaria or glycosuria was observed. The dose was reduced one half and steadily persisted in. The first improvement was in the skin and hair and general improvement soon followed. At the end of one year she has gained seven inches in height, the body is becoming symmetrical and mental gain is so marked that she has begun to attend school. On account of the rapid growth under thyroid treatment it has been advised to keep patients in bed as much as possible, as the leg



bones are apt to bend, but in this case there seemed no tendency to that trouble and the child was allowed to move about as freely as she wished.

### *Empyema in Children.*

FLOYD M. CRANDALL (*Amer. Jour. of Surg. and Gym.*, December, 1900) says that while empyema is of comparatively frequent occurrence in children under five years of age, it virtually never occurs as a primary affection, but is secondary to pneumonia, purulent affections of other organs and the infectious fevers. Its onset so frequently occurs before the resolution of pneumonia that the signs are often contradictory and puzzling. On account of this daily examinations should be made. The physical signs of pyothorax are often deceiving, especially those obtained by auscultation. The normal respiratory sounds are so loud and the pleural cavity so small that a moderate amount of fluid causes but little change in the sounds, while with a large quantity a distinct bronchial sound may be obtained. This is confusing, because in the adult chest loss of the respiratory sounds is characteristic of the presence of fluid. Catarrhal pneumonia in a child's lungs under a layer of fluid may give all the usual râles, thus rendering the diagnosis difficult. The fremitus and voice sounds are frequently but little diminished.

Percussion is more helpful in diagnosis. Flatness or even dullness from top to bottom upon one side of the chest is suggestive of fluid. Large effusions on the left side displace the apex of the heart. For determining the character of the fluid an exploratory puncture through clean skin with an aseptic needle affords the only reliable means of diagnosis.

While it is possible that localized areas of pus may be absorbed or otherwise spontaneously removed, the probabilities of such a happening are so slight that it is not wise to wait. Aspiration and other temporizing methods are absolutely futile. Free incision with drainage is the only efficient treatment. The incision must be free, the drainage tube of good size, the cavity should not be irrigated, and every effort must be made to render the wound aseptic. In young children, if performed early, simple incision is often sufficient to effect a cure, but where there has been delay, ribs should be excised.

### *Fatal and Infantile Typhoid.*

JOHN LOVETT MORSE (*Archives of Pædiatrics*, December, 1900) says that little reliance can be placed on the numerous data on this sub-

ject prior to the differentiation of the typhoid bacillus and the discovery of the typhoid serum reaction. Statistics show that from 50 to 70 per cent. of typhoid cases complicating pregnancy abort, and various causes have been assigned: 1. the high temperature; 2. the accumulations of toxins in the maternal blood; 3. the death of the foetus. The last named is the most generally assigned, and the foetal death is considered due to the passage of toxins through the placenta or to intra-uterine typhoid. From an elaborate review of the recent literature of the subject, the conclusion is drawn that the typhoid bacilli can pass from the mother to the foetus through the placenta, but probably not through a normal placenta. Frascani's experiments always showed numerous placental hæmorrhages. Cultures from the spleen, liver, intestines and blood of infants dying before or soon after birth showed the presence of typhoid bacilli, but the lesions of the intestines and mesenteric glands characteristic of typhoid in extra-uterine life were not present. The liver and spleen were sometimes enlarged, however, and slight hæmorrhages had taken place into various organs in some cases. Other bacteria can pass through the placenta in the course of typhoid; the *staphylococcus pyogenes albus* and *aureus*.

The difference in the pathology of intra-uterine and extra-uterine typhoid are due to the different channels of infection. In the former the bacilli enter the circulation directly through the umbilical vein and the infection is generalized from the start. In the latter the bacilli enter by the mouth and localize in the intestine, general infection following later. This general infection accounts for the great mortality in foetal typhoid. Another reason for the absence of intestinal lesions is that the intestine is not functioning in intra-uterine life. A positive Widal reaction has been found in the blood of infants born alive and well after the mother has passed through typhoid; whether this is a proof of intra-uterine typhoid and the recovery of the infant is doubtful. The agglutinating power may have been transmitted from the mother through the placenta, the foetus not having the disease. There are, however, many cases on record which prove that infection of the foetus does not necessarily follow typhoid in the mother.

Except for the lessened exposure through food in the first year there seems no reason why typhoid should be so much less frequent in infancy than in later life. The symptoms are about the same as in adult life, but the course is shorter and the mortality greater. It is possible that these statistics may be based on severe cases only, the milder cases having escaped notice. The pathological changes in the intestines are, as a rule, insignificant.

The serum reaction occurs in infantile as in adult typhoid, but there is no data to prove its occurrence in foetal typhoid. The agglutinating power is not always present in the blood of infants born of women with typhoid; its transmission seems to depend on the strength of the agglutinating power in the maternal blood and the length of time the placenta is exposed to it. While the agglutinating power can pass through the normal placenta, part of it is arrested in the transmission. The agglutinating power may be formed in the child in response to toxins transmitted through the placenta. It may be transmitted to nurslings through the milk and appear in the infant's blood in less than twenty-four hours, and lasts but a few days after the cessation of nursing. It is weaker in the milk than in the maternal blood, and always weaker in the infant's blood than in the milk.

#### *Poisoning by Vapo-Cresolene.*

S. S. ADAMS (*Archives of Pædiatrics*, December, 1900) reports two cases of carbolic acid poisoning directly attributable to the inhalation of the fumes from a vapo-cresolene lamp. The fact of the possibility of such an event occurring must be borne in mind, as vapo-cresolene is widely used as a "home remedy" for coughs and colds as well as in pertussis. The first case was a child a year old, who had been shut in a small room with a vapo-cresolene lamp. The child was in coma, with cold sweat and pulmonary œdema; no urine had been passed for twenty-four hours and before that the urine was dark. The open air and an abundance of fresh water to drink revived the child. The second case was a child of six months, said to be dying from pneumonia. The temperature was only 100° by rectum, but the pupils were dilated, there was cold sweat, stridulous respiration and mucous râles over both lungs. The odor of carbolic acid was very noticeable. A vapo-cresolene lamp had been kept burning near the child's bed since the evening before. The urine had not been discolored. Fresh air and water were again the treatment and the child recovered. Both cases were seen in consultation.

#### *Pulmonary Tuberculosis in Infants and Children.*

FRANK PARSONS NOREURY (*Archives of Pædiatrics*, December, 1900) says that while heredity may be a factor in some cases of tuberculosis occurring in children, in the majority of cases it does not

appear before the child is three months old, showing it to be an acquired infection. Children with tuberculous mothers, constantly exposed to infection, develop the disease at an early period. The infection most frequently takes place through the respiratory tract, the primary lesion being either the bronchial lymph nodes or the lungs. But the infection may come from the intestines and find its way through the lymphatics to the lungs; catarrhal diseases of the intestines lessen the resistance of the child and render infection from milk or otherwise more liable to occur. A possible source of infection is the flesh of tuberculous animals, which, although buried, may be dug up by pet dogs and cats, who become infected and carry the infection to children.

Pulmonary tuberculosis in infants often follows whooping-cough, influenza and the catarrhal disturbances incidental to measles, scarlatina, etc., which pave the way for infection by debilitating the patient. Several distinct varieties, clinically, are found in children: 1. Apyrexial tuberculosis, characterized by emaciation, vomiting and diarrhoea. 2. Acute miliary tuberculosis, with high fever and much prostration, simulating typhoid and meningitis. 3. Pulmonary phthisis, similar in symptoms to the same disease in adults. 4. A broncho-pneumonic form. The distinction between this last form and non-tuberculous broncho-pneumonia lies in the presence or absence of the bacillus tuberculosis.

Complications are rare in children under two years of age. After that age tubercular meningitis is the most common and severe complication. Tubercular diseases of the joints and bones and chronic empyema also occur.

The broncho-pneumonic form is invariably fatal. But chronic tuberculosis of the lungs in childhood may be ameliorated or even cured.

The child of a tuberculous mother should be brought up on sterilized food, kept apart from the mother in large sunny rooms, with as much time spent in the open air as possible. Adenoids must be removed and all catarrhal affections promptly and energetically treated. Where pulmonary tuberculosis develops the greatest reliance must be upon fresh air and abundance of food. Children take more kindly to pure cod-liver oil than adults, and this should be given persistently. Raw eggs can be taken even by quite young children. Plenty of wholesome food at proper intervals should be given, for in a long series of cases the patients who do well are those who can take plenty of food. Few drugs are of benefit. Creosote or creosotal in small quantities, in milk three times a day, is often a benefit. Some simple laxative, such as cascara, is usually needed to regulate the bowels. Phosphoric



acid in elixir of pepsin improves the appetite and promotes digestion. If the cough is troublesome heroin  $\frac{1}{25}$  gr., or codein  $\frac{1}{10}$  gr., may be combined with some suitable cough mixture. Fever is best controlled by sponging and baths, or the coal tar preparations may be used with caution.

### *Icterus Neonatorum.*

H. M. McCLANAHAN (*Western Med. Review*, Dec. 15, 1900) says that in maternity institutions about one-third of the new-born infants suffer from jaundice, but in private practice it seems to be less frequent. Cases that terminate fatally are comparatively rare, and are most commonly due to congenital defects in, or absence of, the bile ducts. The pressure on the ducts from neoplasms may cause jaundice. Jaundice may also exist in connection with sepsis; it is usually associated with sepsis due to a phlebitis of the umbilical vein and does not appear until the fifth or eighth day of life, is accompanied by fever, convulsive movements and gastro-intestinal disturbances. The stools become clay-colored and the urine leaves a stain on the diaper. In obstructive jaundice there is marked enlargement of the liver, loss of weight in spite of an abundance of food, and sometimes a subnormal temperature. These cases may live for weeks or months and die from exhaustion. Syphilitic jaundice is rare, and is usually accompanied by epiphysitis and pemphigus of the hands or feet. The history of the mother will confirm the diagnosis. Prompt mercurial treatment may result in recovery. Either the diluted unguentum hydrarg., or the oleate of mercury in 5 per cent. strength, may be used for inunctions, while small doses of mercury should also be given by mouth. In cases due to sepsis, obstruction or congenital defects little can be done.

The common causes of simple jaundice are feebleness of the infant, chilling of the general skin surface, or any cause disturbing the equilibrium of the circulation. There is no appearance of bile in the urine, the stools are about normal, and the staining is confined to the skin without affecting the sclerotic. These cases usually regain their natural color in a few days without any special treatment beyond good hygiene. Where the jaundice persists or the mucous membranes become involved, warm alkaline baths may be given of the strength of one teaspoonful of borax to a pint of water. Sterilized water internally aids in diluting the secretions. Where the jaundice develops after the first week of life it is due to a catarrhal condition of either the duodenum or duct and 1-10 grains of gray powder may be given every hour

for ten doses, followed by 5 grains of phosphate of sodium, well diluted in water, three times a day. One-half to 1 grain of muriate of ammonia, well diluted, and given every three hours, is another excellent remedy. Gentle friction over the liver is recommended.

A case reported by Ashby, of a child dying on the twelfth day, deeply jaundiced, the autopsy revealed a patent ductus venosis.

### *Treatment of Hernia in Children.*

A. J. OCHSNER (*Jour. Amer. Med. As.*, Dec. 22, 1900) says that although the results of surgical treatment for hernia in children are satisfactory, both as regards permanency of cure and safety of operation, yet since statistics show that without surgical treatment fully 75 per cent. of all herniæ in children heal spontaneously before the age of thirteen years, operation should only be insisted upon in certain selected cases. Thomas Charles Martin has shown that in the broadening of the pelvis in growing children the parietal peritonæum enlarges at the expense of the mesentery, and the latter being thus shortened prevents the entrance of the intestines into the inguinal canal. At the same time there is a displacement of the internal ring, which still further aids in curing the hernia.

The development of herniæ in children is favored by: (1) faulty development of the abdominal wall; (2) insufficient strength in the tissues involved in closing the umbilical, inguinal or femoral openings; (3) unclosed condition of the tunica vaginalis; (4) intra-abdominal pressure which is due to *a*, gaseous distension resulting from improper feeding; *b*, the exertion in accomplishing defecation in cases of chronic constipation; *c*, the same exertion in emptying the bladder on account of obstruction due to phimosis; *d*, severe, long-continued coughs. The spontaneous healing of herniæ will be facilitated by relieving the intra-abdominal pressure and keeping the hernial sac empty. This can be accomplished by a truss and keeping the child in bed, with the foot of the bed elevated sufficiently to form an angle with the floor of from 20 to 30 degrees. The diet must be carefully guarded, constipation relieved, adenoids, polypi or other conditions causing cough attended to, and an operation for phimosis performed if necessary.

Operation is indicated (1) in strangulated hernia; (2) in irreducible hernia due to adhesions; (3) where the opening is unusually large in a free hernia, especially if the condition is congenital and the hernia cannot be retained by a truss; (4) in reducible hydrocele.

Except in class 3, the operation should consist simply in carefully dissecting out the sac, ligating it within the abdominal cavity, cutting away the sac and permitting the stump to retract within the abdominal cavity. The stitches should be tied loosely in order not to cause pressure necrosis of the weakened tissues, and the tissues of the cord in the male should be manipulated carefully, for fear of causing atrophy or of preventing the full development of the testicle. The maintainance of the recumbent position, with the foot of the bed elevated, is of great importance in operative as well as in non-operative cases.

### *Hydrencephalocoele.*

CARL BECK (*Jour. Amer. Med. As.*, Dec. 22, 1901) says that with the employment of asepsis, and of the Roentgen rays as a means of ascertaining the exact conditions, the prognosis of hydrencephalocoele has become more favorable. Three cases, with two recoveries, are reported. The first case was a child five weeks old, with a non-pulsating tumor the size of an orange projecting from the naso-frontal region. Both parents were anæmic, and the mother, during the early weeks of pregnancy, had fallen from a four story window, fracturing three ribs and the olecranon. The walls of the tumor were thin and the covering seemed normal. Contractions of the tumor were noted, especially when the child was crying. There was fluctuation and the contents could almost entirely be pressed within the skull without causing any reaction. The Roentgen rays showed behind the light shade, representing the fluid, a dark one, interpreted as cerebral substance over the area of the triangular bony opening. The nasal bones were shifted downward. After constriction at the base of the tumor a prophylactic silk suture was conducted around the whole circumference of the tumor at its base. An elliptic flap was dissected from the center and the cavity opened laterally. After the escape of half an ounce of normal cerebral fluid the sac lining, consisting of dura mater protecting degenerated cerebral substance was exposed. Near the base cerebral substance protruded. This was severed from its lateral connections and reduced into the cranial cavity. Two-thirds of the sac was removed and the remainder freed from the frontal bone, including periosteum, until apposition without tension was obtained. The edges were united with thin formalin catgut, and supported by another layer of the overlapping soft tissues. The skin was closed with silk. No anæsthetic was used and no stimulants administered. Ten days later the wound had healed.

Six months later a skiagraph showed narrowing of the bony canal and approach of the nasal bones to the os frontis. The child had developed well and was normal in every respect.

The second child was seen when seven weeks old. A tumor, larger than his head, projected from the foramen magnum. The fluid contents could not be pressed within the skull, which was microcephalic, with thick sutures and small fontanelles. The child never cried, but moaned with an animal sound. Owing to the extreme restlessness of the child a good skiagraph was not obtainable, but a pedicle could be made out. The child was blind. The parents refused operation at first, but two weeks later convulsions and fever appeared, with congestion of the tumor. Excision of the tumor was performed, and the following day the child's condition was good, but on the fourth day it died, apparently from purulent meningitis. Autopsy was refused.

The third case was an encephalocele in a feeble child of three months, with a hare-lip and cleft-palate. The pulsating tumor sprang from the superior angle of the occiput, and had increased in size since birth. The treatment consisted of pressure by means of a large iodoform-gauze-collodion dressing. At the end of a year the tumor had entirely disappeared. The cleft-palate and hare-lip were successfully treated and at the age of two years the child is in perfect health.

#### GREAT BRITAIN.

##### *The Hydrostatic Test of Stillbirth.*

T. DILWORTH (*British Med. Jour.*, Dec. 1, 1900) reports an inquest held on the body of an illegitimate child, exhumed ten days after its burial. The evidence at the inquest was that the labor had been somewhat precipitate, but that the child, although feeble, had been born alive and lived five hours. It had been seen alive by a neighbor, the parish nurse and a medical man. On opening the chest the lungs were found in a state of complete atelectasis. When the lungs were immersed in water, either together, separately, or even in small portions, they sank immediately. Had not the testimony of five reputable people under oath confirmed the fact that the child had lived, the writer would have been compelled to swear that the child had never breathed and was stillborn. The only explanation seems to be that the child had lived by whatever aëration the blood received through the trachea and larger bronchi.



*On the Causation of the Congenital Stridor in Infants.*

JOHN THOMSON and A. LOGAN TURNER (*The British Med. Jour.*, Dec. 1, 1900) say that the peculiarity of respiration in these cases consists in croaking or crowing sounds accompanying inspiration, varying in loudness with the vigor of inspiration and accompanied by a corresponding amount of thoracic indrawing. There are occasional free intervals. In severe cases of long standing there is apt to be expiratory croaking also. It comes on soon after birth, increases in loudness during the first few months, remains about the same for a few months, gradually lessens and disappears during the second year. The conclusions arrived at by the writers are based upon the examination of fifty specimens of the larynx removed from the bodies of still born infants and of children up to the age of ten years. The study was directed mainly to the upper aperture of the larynx. In infants the structures bounding this aperture are softer and more collapsible than in the adult, and the aperture is relatively narrower from side to side. Experiments, consisting in making forcible inspirations through a bent metal tube, 18 inches long, introduced into the trachea, were made, and it was found that a striking alteration in the form of the aperture took place. The change varied in different cases, usually assuming one of three types: (1) The sides of the opening were sucked together, forming a narrow mesial slit; or (2) the epiglottis was drawn backwards and downwards so as to act as a lid; or (3) the arytenoid cartilages met in the middle line, the margins of the anterior portions of the aperture remaining unaffected. Sutherland and Lack consider the cause of stridor to be a congenital malformation of the upper laryngeal aperture, similar to the change produced in the experiments above, but the writers hold that the deformity is acquired by the constant sucking in of the upper aperture of the infantile larynx, induced by the ill co-ordinated and spasmodic nature of the breathing, and that stridor is primarily caused by a disturbance of the co-ordination of the respiratory movements, probably due to developmental backwardness of the cortical structures which control them. The fact that a similar crowing sound is developed after excited crying, or in coming out of chloroform in normal children, shows that a congenital deformity is not necessary. The sound is not produced in the pharynx, as is proved by its high-pitched phonic character, and by the fact that it persists when the mouth is occluded by the nipple, during yawning, or when the tongue is depressed by a spatula. The symptoms are not due to compression by enlarged glands, for in the few fatal cases of infantile

stridor no enlargement of the thymus or lymphatic glands has been noted, and in the ordinary cases there is no distress in breathing and no cyanosis. The neurosis causing the condition has not, in the writer's experience, seemed to depend on the presence of adenoid growths or other obvious causes of reflex irritation.

*Traumatic Tetanus in a Child of Six and a Half Years. Antitoxin.  
Recovery.*

HARCOURT COATES (*The British Med. Jour.*, Dec. 22, 1900) reports the case of a healthy child who fell, lacerating a finger and breaking the nail. The spot where he fell had been recently covered with a rotting heap of horse-manure. The wound was washed with a 20 per cent. solution of carbolic acid and dressed. Two days later there was free suppuration under the injured nail, therefore the hand was soaked in a 1-100 solution of bichloride of mercury, the nail removed and the finger dressed with cyanide lint. All went well until thirteen days after the accident, when he had trismus, well marked risus sardonicus, difficulty in swallowing, tension of the sterno mastoid and stiffness of the back. Temperature 99.4° F. A calomel purge was ordered and 5 grs. of chloral hydrate and potassium bromide every three hours. Soon after this spasm began, increasing in severity and frequency. Opisthotonos was marked. The thoracic wall was absolutely fixed. Temperature 101°, pulse 140, respirations shallow and irregular and skin dusky. On the following day 15 c.cm. of antitoxin serum was injected and the chloral and bromide increased to 10 grs each. A severe spasm followed the injection of the antitoxin. No diminution in the spasm was observed, and the child was so exhausted that death seemed imminent. Three days later the intervals between the spasms became longer and they could be checked by hypnotic influence, enabling the child to get some sleep. In two weeks the spasms were reduced to short jerks, occurring occasionally. The backward curving of the head and the risus sardonicus were the last symptoms to disappear. Two months later the child was well, except for attacks of unusual irritability, and one foot was slightly turned in.

---

## MASTURBATIONAL NEUROSES.\*

BY WILLIAM C. KRAUSS, M.D., BUFFALO, N. Y.

*(Author's Abstract.)*

The writer called attention to the fact that of late the habit of masturbation has been defended and partially encouraged by medical men and others, and to offset this teaching by showing the difficulty in treating such patients, was the essence of the paper. The acme of physical and mental activity has fallen from between the fortieth and fiftieth year to the decade embraced by the thirtieth to fortieth year and anything that taxes the growing youth saves just that much mental and physical strength. It must not be surmised that any lad once addicted to this habit is a confirmed neurotic, for boys healthily constituted in body, mind and morals do not intend to come under this influence to any hurtful extent. The author warns against giving a favorable prognosis in cases of functional nervous disease with an underlying history of masturbation coupled with a neurotic family history. The length of time in which these diseases generally are brought to a successful termination will be far exceeded, if at all terminated. Cases giving no history of masturbation which fail to respond to treatment after a sufficient interval should be most rigidly interrogated, and in many cases the suspicion of masturbation will be verified. It is almost useless to try any form of treatment or expect any definite results in these functional neuroses if the habit is not discovered and corrected. The author concludes as follows: "My own opinion may differ from others, but from my experience I would rather treat any other form of functional nervous disease than a case of masturbational neurosis."

---

\* Read before the Medical Society of the State of New York, at Albany, Jan. 29, 1901.

## NEW INSTRUMENTS.

By H. F. GAU, M.D., CINCINNATI, OHIO.

*An Obstetrical Dilator.*

The obstetrical dilator consists of an upper dilating extremity shank, lock, and handles, with notched spring attachment.

The dilating extremity comprises (1) the upper rounded, smooth surfaces, with an outward inclination, having a tendency toward preventing the dilator from slipping out of the cervical canal after its insertion; (2) the oval dilating surface proper is about one inch in length and  $\frac{1}{2}$  inch in diameter in the small size, and the large size is almost  $1\frac{1}{2}$  inches in diameter.

The shanks are arranged so as to produce an almost parallel opening of the dilating surfaces.

A broad-headed pivot in which fits a corresponding opening on the other half of the dilator comprises the detachable lock.

The handles are large enough to be grasped by the full hand, with a notched spring attachment at the end, allowing the temporary opening and closing of the dilator.

The dilator is introduced by delicately poising the blade containing the lock proper in the right hand and gently guiding it along the left index finger, previously introduced in the vagina, until the dilating extremity has entered the uterine cavity up to the os internum. The handle is now transferred to the left hand, the right hand guiding the other half of the dilator along the under surface of the upper half until it also has entered the cervical canal, when the instrument is locked, by bringing both shanks together in a parallel direction. The cervix may also be fixed with tenaculum forceps to allow the guiding of the blades.

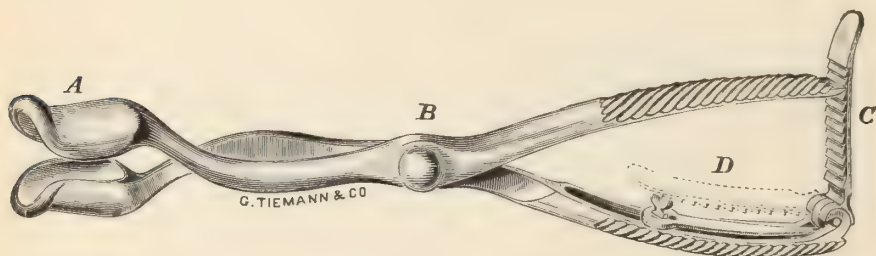
A cautious and intermittent pressure on the handles by imitating the normal contractions of the uterus during the first stage of labor, and by gently sweeping the dilator around the circle of the cervix you may produce either a slow dilation or, if there are any urgent indications, a rapid dilatation of the cervix.

The indications for the use of the obstetrical dilator are: All



cases of eclampsia in which it is desirable to produce labor, placenta prævia; in fact, all cases where manual dilatation is indicated.

The advantages are (1) the shape of its oval dilating extremity, tending to prevent any lacerations of the cervix; (2) the aseptic construction of the instrument; (3) by introducing one blade at the time of the small size dilator, the instrument may readily be introduced in a cervix which admits the index finger; (4) the first stage of labor, especially in cases of eclampsia, etc., may readily be accelerated.



Results: The small size dilator was used at the Bellevue Hospital in Dr. W. Gill Wylie's clinic, by his resident physician, Dr. H. Emerson, to dilate a four-months' pregnant uterus. A dilatation of two inches in diameter was accomplished in twenty minutes, which allowed the rapid extraction of the fœtus.

The small size, followed by the large size dilator, used in three cases of eclampsia at the Johns Hopkins Hospital, Baltimore, in Dr. J. W. Williams' service, in which the manual dilatation tried previous to the use of the dilator was found ineffectual, the dilators produced rapid and effectual dilatation of the cervix without laceration.

907 Nassau street.

THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

---

MARCH, 1901.

---

PUS IN THE PERITONÆAL CAVITY.\*

BY ROBERT T. MORRIS, M.D., NEW YORK.

The surgeon pricks his finger slightly while operating upon a case of advanced septic peritonitis—the patient recovers, but the surgeon dies.

About this illustration we have a group of pathological facts that seem to be better recognized by physicians than by the surgeons at just this period of our progress, and yet surgeons are the ones who most need to use our knowledge on the subject of hyperleucocytosis.

The reasons why the patient recovers and the surgeon dies are founded upon well established data: we need not wait for the settling of certain disputed points about the way in which bacteria are disposed of. If Metschnikoff says that bacteria are destroyed by certain body cells by the process of phagocytosis, and if Kruse argues that it is not a matter of phagocytosis, but of the destruction of bacteria by alexines furnished by poly-nuclear leucocytes, we have little interest in the discussion. It is sufficient for us to know that when bacteria are making headway in our tissues certain body cells are enormously increased in number and a warfare is at once engaged in between the bacteria and these cells. If bacteria were not met by antagonistic cells we would always die as the result of a pin prick.

Physicians have been making practical application of the phenomenon of hyperleucocytosis and have purposely called it to their aid, while surgeons seem to be much more tardy in modifying their methods

---

\* Read before the ninety-fifth annual meeting of the Medical Society of the State of New York, January 29, 1901.

to meet the advantages offered by our newer knowledge on the subject. Nowhere is this more apparent than in the various methods advocated for the treatment of patients with pus in the peritonæal cavity. There is much unnecessary diversity of opinion among surgeons concerning the surgical principles that are to be applied in such cases. There is no necessity at the present day for such wide differences of opinion, and it is a matter of vital interest to some patients.

A famous French surgeon, visiting this country not long ago, said to me that the greatest need of the day in American surgery was for American surgeons to see each other work. He had visited our clinics in many cities and that was the deepest single impression that had been made upon him.

In our cases of pus in the peritonæal cavity shall we make it a rule to wipe away the pus with gauze or sponges, meanwhile handling bowel extensively and shocking its sympathetic ganglia?

Shall we make the small incisions and leave the peritonæal cavity gauze?

Shall we make small incisions and leave the peritonæal cavity full of decinormal salt solution after closing the incisions?

Shall we close our abdominal incisions and trust to hyperleucocytosis alone?

There are abundant hospital records to give us statistics for fixing the principles which should rule us in our decisions.

Let us consider more at length the reason why the patient with advanced septic peritonitis lived while the surgeon died, and from these principles read the moral that is pointed at our practice.

The patient was protected by new poly-nuclear leucocytes manufactured by herself for the occasion. The surgeon was not so protected. The reason why the patient was protected was because the bacteria were met by leucocytes before they had become very virulent, and although the bacteria increased there was a corresponding increase of antagonists. The bacteria were finally winning and would have carried the day if the surgeon had not stepped in and removed the chief collection of fluid that was carrying the toxins of the bacteria. The moment that the surgeon had done this, the leucocytes in enormous battle array triumphed over their disabled enemy. The surgeon had turned the tide of battle in their favor by perfectly rational procedure. Meanwhile the bacteria in the stage of most active development were carried into the surgeon's finger by a slight prick, and when bacteria are in a state of active development it requires a quicker response on the part of the body cells to destroy them. In the surgeon's case he

was not able to meet these active bacteria promptly enough and they destroyed him. If his infection had begun more slowly and the bacteria had not been under such active headway, they would have been effectively met and he would have had just a needle prick—that is all. I am leaving out of this discussion the matter of the special resistance of individuals and of various protecting cells in order to keep the principles clearly in mind. Now let us get to our conclusions.

Anything which shocks our patient interferes with the function of the sympathetic nerves which control the manufacture of leucocytes. A long continued operation shocks the patient and lessens the resistance. The use of gauze packing shocks the patient and lessens his resistance.

It is often said in cases of advanced appendicitis that the surgeon did not get the case in time—and yet, he used half a yard of gauze in the patient's abdomen!

If we step out into the street, take ten healthy car conductors from their cars, put half a yard of gauze in the abdomen of each one this afternoon, we will find by to-morrow that we did not get many of them in time! If the gauze contained the poison iodoform, a still smaller number would have been obtained in time. Now, if strong, healthy men cannot bear half a yard of gauze in the abdominal cavity, why should a weak, septic patient tolerate it? He cannot.

The employment of gauze packing, then, seems to be one of the inferior methods in abdominal surgery, as shown both by our theory and by actual statistics. The use of gauze packing not only lessens the power of the patient's sympathetic ganglia to engage in manufacturing leucocytes, but it sometimes causes ileus by mechanical pressure. It causes a solar plexus blow to the patient when it is removed, and it leaves a wide open place for the development of a post-operative ventral hernia, which is rarely indeed necessary to-day.

The method of making small incisions, which are closed after the abdominal cavity has been left full of decinormal salt solution, is perhaps one of the methods that is not inferior. It does not include the idea of a full dependence upon leucocytosis perhaps, but the salt solution dilutes toxins to such a point that they are practically inert. The salt solution is not a culture medium; it is speedily carried off by the excretories and with it go the toxins in solution. The patient avoids the distressing thirst that is common after abdominal operations, the vaso-motors are stimulated, and theoretically this plan of treatment has much merit. I have not as yet employed this method much because of my confidence in the resource of unaided leucocytes, and have



brought to bear the principle that if we operate rapidly, avoid the use of large incisions, of gauze packing, of iodoform, and of extensive handling of the bowel, we avoid shocking the patient's sympathetic system, which can do better work than the surgeon in removing infection. Tait employed this principle empirically, but now we understand the reasons for his results. I have confined myself to disposing of the chief collection of pus, leaving the rest to be disposed of by the so-called phagocytes, and have gradually arrived at the method of closing the incision completely in most of my cases of pus in the peritonæal cavity. It is remarkable to see how much better patients do under this method of treatment than under the methods which I formerly employed and which were the commonly accepted ones.

After a long continued operation with a large incision, free handling of bowel and the use of large drainage apparatus, patients are commonly very much depressed and give every evidence of depression for several days after the operation. Now, when the abdomen is closed completely, I find this same class of patients on the morning after operation with bright faces, fine reaction and often wishing to read the newspaper or have substantial nourishment within twenty-four hours after the operation.

Secondary abscess has formed in several of my cases, and under such circumstances has been well walled in and with a tendency to point at the line of incision in the abdominal wall. In many cases in which a considerable amount of septic fluid must have been left in the peritonæal cavity there was no tendency to abscess formation and the septic fluid was disposed of by the leucocytes.

The key-stone idea in this method of treatment, then, is avoidance of all the things which have a tendency to shock the patient and interfere with his manufacture of leucocytes, which goes on most rapidly when he is in the best physical condition.

Wisely applied stimulation and methods for nourishment are essential factors in this plan of treatment.

I would not advise any beginner in surgery to place full dependence upon leucocytosis until he has gradually worked toward this point from an experience with older methods of treatment that are in common employment. One must become convinced out of experience, in order to avoid the feeling that he is experimenting upon any of his patients, in spite of the fact that theoretically our principles are clear.

In making an elaborate study of the subject I presume that we shall have to set aside a small proportion of cases in which drainage will be a necessity, hæmorrhage cases for instance, but most of the cases that

are drained to-day are drained because the surgeon feels that he ought to assume a responsibility that really belongs to the leucocytes, and for which they are well equipped if the surgeon does not interfere with their production and their work.

---

## THE COMPLICATIONS OF GONORRHŒA IN WOMEN AND THEIR PROPHYLACTIC TREATMENT.\*

BY JOSEPH TABER JOHNSON, M.D., WASHINGTON, D. C.

This very interesting and important subject will be considered under the following heads:

1. The importance of these complications.
2. Their frequency.
3. Their nature and variety.
4. So-called "latent gonorrhœa."
5. Their importance from an obstetrical and infantile standpoint.
6. Treatment.

The more I have thought of this subject, since I gave the Chairman of the Essay Committee the title of the paper I promised him to write, the more important has it seemed to me. While many diseases, both medical and surgical, have been shorn of their terrors by the discoveries and advances of the Nineteenth Century, very little seems to have been done to prevent the complications of gonorrhœa in women. So many sad cases of pelvic disease of specific origin are constantly coming under the care of those in charge of the female clinics in the dispensaries, and of the gynæcological wards of our public hospitals, that it is almost impossible to overestimate the importance of the subject.

The evidence is indisputable and overwhelming that many women lose their lives annually from the pelvic inflammations caused by these complications, and that thousands probably lose their health, or their power of conception, from the same cause. One reason for these sad results may be on account of inappropriate treatment by unskilled persons and the too early discharge of patients of both sexes, as cured, when they are still able to communicate the disease to others. Another important point for us to consider is that this disease, and its dire effects,

---

\* Read before the Medical Society of the District of Columbia, January 30, 1901.

are not confined entirely to the debased, criminal and outlaw classes of society, but occasionally it wrecks a home and destroys an innocent and valuable life in the highest walks of society.

This very common and disagreeable disease, which it is just as natural for us to dislike to discuss, as it is to treat, derives importance again from the fact that many innocent young brides have had their lives absolutely ruined by marrying supposedly healthy husbands who honestly thought themselves cured. While there are two great wrongs done in a case of this kind it is quite possible that the greater wrong has been done by our own profession in giving an opinion, either through ignorance or carelessness, that the patient was so far cured that it was perfectly safe for him to marry.

The importance of this subject is still further shown by the astounding fact that, from the best statistics I have been able to obtain, there are 300,000 women in this country leaving lives of prostitution, and the estimate is made by health officers and the superintendents of police in 30 large cities, who make reports on this subject, that for every woman who regularly resides in a house of ill-fame, there is at least one, if not more, just as bad, who never or rarely becomes known to the police. This will give half a million at the lowest estimate of candidates for this disease in our country alone. Take the world at large, as we do in estimating the probabilities in some other diseases, such as cholera or the plague, and the women in the world who have this disease to-day, or are liable to have it to-morrow or next week, may fairly be reckoned by millions. An army surgeon who recently returned from the Philippines is quoted, when asked what was the prevailing disease in our new possessions, as having answered: Gonorrhœa.

From the same authority from which I get the 300,000 item I learn that the average length of life of these women is only five years from the time they begin a life of prostitution, and that 40,000 of them die annually. While some die from the effects of dissipation, and the ordinary diseases incident to humanity, it would seem fair to assume that 10 per cent., and quite possibly 25 per cent., die from the effects of complications of the disease under consideration. I have questioned many of these women, who have been patients in dispensaries and hospitals, also, when called to attend them in their houses, and have rarely been told that they had never had this disease. In some cases they said they had had it half a dozen times. I think Bland Sutton of London is correct when he gives Gonorrhœa as the chief reason of sterility of the prostitute class. A gonorrhœal salpingitis, whether it goes on to suppuration and the formation of pus tubes and ovarian abscesses or

not, nearly always destroys the ciliated epithelial lining of the tube to such an extent and so cripples the ovary as to render conception and gestation next to impossible. Sterility then is very common, if not a universal legacy inherited by the female victims of this disease.

*The nature and variety of these complications:*

In speaking of gonorrhœa in the female the "International Text-Book of Surgery" says, on page 756, Vol. II.: "The chief complication and danger in gonorrhœa in the female is the infection of the uterus and uterine appendages." "Gonorrhœa is the chief source of salpingitis and pelvic peritonitis." Among the other complications may be mentioned: Inflammation and suppuration of the Vulvo-vaginal glands, Urethritis, Cystitis, Ureteritis, Pyelitis, Nephritis, and Pyo-nephrosis; Proctitis, Endo-cirvicitis, Endometritis, Salpingitis, Ovaritis, Tubo-ovarian abscesses, Pelvic-peritonitis and General Peritonitis; Paratubal, ovarian and uterine inflammations; Puerperal complications and very destructive infantile ophthalmia: Generally sterility or but one child.

The same authority just quoted defines gonorrhœa to be "A suppurative disease of the tissues of the human body caused by infection with the micrococcus of Neisser," known as the gonococcus. "It is always primary in mucous membranes but, secondarily, it may attack serous membranes and fibrous tissue, synovial sacs, bursa, tendon-sheaths, the peritonæum, pleura and the pericardium." Familiar illustrations are gonorrhœal rheumatism and ulcerative endo-carditis. The peculiar germ of gonorrhœa may reach near or distant parts of the body through the lymph and blood streams and may penetrate the tissues and produce suppuration and cause glandular adenitis, especially in the inguinal region.

The frequency of the occurrence of these important and frequently dangerous complications cannot be stated in exact percentages, as the experience of surgeons and writers will differ. Those in public dispensary and charity hospital practice will see many more of these sad cases than those who are doing a private practice only, among the better class of patients. But even these are too frequently innocent victims of accidental occurrences. Thus Sanger announces "that 25 per cent. of his hospital and private patients have gonorrhœa." Lomer found the gonococcus in 60 per cent. of the cases in Schroeder's clinic. One observer places the average as high as 80 per cent. It is reasonable to suppose that these clinics were largely made up of the prostitute classes. Lawson Tait once told me that quite a good proportion of his abdominal operations were on account of the complications of



gonorrhœa. Dr. Robbins, of this city, and a professor of genito-urinary diseases in one of our medical colleges, tells me that he believes that one-half the abdominal operations performed upon women throughout the world are caused by the complications of gonorrhœa. In an article in the *Maryland Medical Journal*, in January, 1899, on "The Gonococcus of Neisser," he quotes, on page 6 of his reprint from German statistics, to show that 23 to 28 per cent., while English and American statistics show, he says, 70 per cent. of all cases of adnexial disease as due to gonorrhœa. Dr. Joseph Price, in discussing a paper of Dr. Bedford Brown on this subject at the Richmond meeting of the Southern Surgical and Gynæcological Society in November, 1891, said: "For the last six years I have treated more cases of pelvic disease than any one else in Philadelphia." The dispensary to which he was attached would not admit these cases, but he was allowed to treat them after the regular dispensary hours were over. He did so, and was so devoted to this class of work that he soon built up a huge clinic for the treatment of venereal diseases. He was so interested that he took a room in the dispensary and procured his meals at neighboring restaurants. He says, however, that he soon had to give up this method of taking his meals, as he discovered that it was impossible to dine at a single restaurant in the neighborhood without being waited on by some one whom he was treating for bubo or gonorrhœa. He states this to show his experience. "I call your attention to this matter," he says, "to emphasize the fact, that I have since operated upon the wives of those men, for huge pus tubes and ovarian abscesses, not by the dozen, but by the hundreds."

Garrigues states, on page 558 of the last edition of his work on Gynæcology, in speaking of the causes of salpingitis and pus tubes, that "in the large majority of cases of salpingitis, and that in the worst form, the purulent salpingitis is either gonorrhœal or puerperal. If gonorrhœa once invades the uterus it has a great tendency to spread to the tubes." I will not repeat or multiply quotations on this point, although it would be interesting to draw attention to the recent writings of Balzer\* and Jullien,† did time permit. All prominent modern

---

\* Balzer, of Paris, read a paper on the "Causes of General Infection in Gonorrhœa," at the International Congress held at that city in August last (*Wien. Med. Presse*, October 21, 1900).

He states that general infection in gonorrhœa is conditioned by both the gonococcus and its toxine, and consists of metastases of the original local disease to various tissues of the body.

The gonococcus tends to burrow into the mucous membrane of the urethra

authorities agree that the two chief causes of suppurative and destructive inflammation of the female pelvic organs are puerperal sepsis and gonorrhœa. Some name one of these first and some the other. Of the two the specific cause is more destruction of function than the septic. If a patient recovers from a serious pelvic inflammation of septic origin, she is more likely to fully regain her health, and have other children later on, than when the cause is specific. Relapses occur from the latter cause and sterility is the usual lot of all women who have once suffered from gonorrhœal salpingitis.

*Latent Chronic or Residual Gonorrhœa.*—Since Noeggerath wrote his philippic on "Latent Gonorrhœa," in 1876, there has been much discussion, much investigation, many denials that he was right and many misgivings lest he might be. Quite a storm was created by his assertions that many cases of gonorrhœa in the male were never cured—that the disease remained latent for months and years; in other words, that a virulent poison remained behind a stricture or existed in a gleety discharge, which was capable, under the excitements and possible excesses of newly married life, of re-exciting the disease in himself and thus infecting the innocent, unsuspecting and loving wife he had so lately promised at the altar to love, cherish and protect.

Dr. A. Palmer Dudley, of New York, in a paper on "Chronic Gonorrhœal Infection," read before the American Gynæcological Society in 1897, quotes from an article by Dr. Lyons, a New York microscopist, published in the *Medical and Surgical Bulletin*, May 1, 1895, in which he says: "Notwithstanding all the facts which have been accumulated in the study of this disease in both sexes, in the last few years, it is a most lamentable truth that there is no disease, at least of such common occurrence, that is so little understood; the diagnosis of which is so often missed, so much neglected and so improperly and unsatisfactorily treated by the vast majority of the profession," and, according to his experience, he says he must include even gynæcological specialists. So you see we are considered no better than the rest of the profession, in a department of medicine, where we are supposed to excel. Dr. Dudley says such has been his own experience. Immediately following Dr. Dudley, Dr. Cushing, of Boston, read a paper on the "Sociological Aspects of Gonorrhœa," and, in order that you may see

while the secretions and exudation-cells tend to carry the micro-organism out of the tissues. Occasionally the gonococcus is able to penetrate the walls of a vessel and thus gains entrance into the circulation.

† "Gonorrhœa and Marriage." Jullien's monograph upon this subject has already become a classic, having recently been honored by a translation into German.

that I am not attaching undue importance to this "rather trivial subject," as so many have termed it, I shall quote two or three of his opening sentences:

"In choosing the subject of this paper I have been led by the immense importance of the remote effects of gonorrhœa on society at large." "The full appreciation, however, of the serious and far-reaching consequences of gonorrhœal infection, acting as it does on the innocent and unfortunate victims, who are our patients, is so recent, and, as yet, is limited, so far, even within the profession to those who have peculiar opportunities of observing the ruined lives and blasted hopes, the suffering, sterility, illness and death which ensue from this infection, in all ignorance, of young wives, as well as foolish girls, that I feel that a society like this has a duty, which it owes to the profession, and through this to the public," etc., etc. Dr. Cushing urged the great and increasing importance of the effects of "latent gonorrhœa" upon the health and growth of nations as well as individuals. He says again, "that, although its full importance has only become apparent *within the last few years*, yet we can not doubt that for ages this disease has acted in the same way, and, if time permitted, I could trace the connection of its influence, with the historical facts known, as to the degeneration and disappearance of conquering races, when subjected to the influence of older and more corrupt civilizations, as well as to the decline and fall of successive empires and peoples."

The power of the gonococcus to infect another after an indefinite period, from the acute attack, has been denied by some, but instances are not infrequent where the most disastrous results have followed the marriage of supposedly cured husbands, months after all pain and discharge had ceased. One of the chief, and, to my mind, most important points for discussion, in this paper, is, when, if ever, may we give our professional sanction to the marriage of a man positively known to have had this disease, and our professional assurance that the trusting and innocent wife will be absolutely free from any danger of infection?

It is probably within the personal knowledge of every doctor in this room that wives have been infected with this disease by ignorant or careless husbands. In some instances these men have been assured by their physicians that they were cured beyond the danger of transmitting the disease to others. This assurance has been construed into a professional permit and sanction of matrimony. The physician may have really believed his patient absolutely well, because he was free from painful micturition and urethral discharge. He may even have examined or had examined the urethral secretion microscopically, and,

in the absence of any germs, pronounced the patient safe and sound. He may not have thought, when he gave this opinion, that these germs were lying back behind a deep and only partial stricture, ready to spring into deadly activity upon the occurrence of venereal excitement or sexual excess. The doctor himself may not have known what we have the most abundant authority for stating now, namely, that ("Dudley's Gynæcology," 2d edition, p. 155) "the chief power of the gonococcus for harm lies in the lasting vitality of the germ *after apparent cure*." This author says further, on this subject: "The gonococcus may remain inactive in the mucous crypts, liable at any time, even while quiescent in the individual, to be communicated to another." Hence many an innocent and previously healthy woman, shortly after marriage to a man who supposed himself to have been cured of gonorrhœa years before, may, by contact with the attenuated virus, get a destructive gonorrhœal infection of her genito-urinary organs.

Lest this statement may be disputed I will give the result of some recent experiments of Wertheim quoted in "Dudley's Gynæcology," p. 155. He reports that human serum agar is the best culture ground for gonococci. In this culture at 40°-43° C. they retain their full reproductive capacity. A direct experiment from pure culture from a gleet discharge of two years' standing gave the following interesting results: (1) Attempted reinfection of the original urethra with this culture was always a failure; (2) the culture when transplanted to a coccus-free urethra produced typical acute gonorrhœa; (3) infection from this back again to the original urethra gave a fresh gonorrhœa, which, after a typical course of five or six weeks, again subsided into a chronic gleet. Thus by passing the gonococci through another individual—that is, through a new culture ground—they became again virulent to the urethra which was invulnerable to them before.

This explains the fact that an apparently healthy subject of chronic or latent gonorrhœa may infect his hitherto uninfected wife and become again infected from her. That is, the gonococci passing through the new culture ground of the wife again became virulent for the husband. We can now understand why the gonococcus, even after years of apparent cure, may regain its full virulence. The microbe may be found in the uterus and tubes long after it has disappeared from the vagina. The crypts of the uterine mucosa furnish a ready resting-place for the germ. It may for long periods remain concealed in a semi-quiescent state, a destroyer of health and a menace to life.

A prominent gynæcological author writes as follows on this subject: "Why do large numbers of apparently healthy young women date



their pelvic infection from the marriage week? Is it, as one author declares, 'the fatigue and excitement of the wedding journey?' Why do so many women with perfectly developed reproductive organs remain sterile from the time of marriage, or after the birth of a single child and a dangerous 'childbed fever?' The causation of too many such cases of hopelessly diseased uteri, tubes and ovaries, not to mention proctitis, with sometimes rectal stricture, urethritis, cystitis, pyelitis and nephritis has been explained by the word 'idiopathic.' Their histories, if written, would often tell of an apparently cured gonorrhœa, before or after marriage, in the husband. If the most destructive infection may follow contact with a subject of gonorrhœa after the discharge has ceased, how perilous must be the slight gleety discharge so often disregarded."

In December, 1893, Dr. T. Gaillard Thomas read a paper on the "Chief Factors in the Production of the Diseases Peculiar to Women," before the New York County Medical Association. Dr. George Tucker Harrison, in the discussion, spoke of the *curse of gonorrhœa* as one of the most common and potent factors. He asserted that Noeggerath's position on latent gonorrhœa, taken many years ago, had been fully vindicated. The dangers to the wife of latent gonorrhœa were great. It was more dangerous to a woman for her husband to have gonorrhœa than syphilis. A sad instance was related of the marriage of an attractive young lady of nineteen to a widower of thirty-five; followed soon by backache, prolonged menstruation, pelvic pain, fever, metrorrhagia, endometritis, salpingitis, oöphoritis, peri-oöphoritis—then contraction by accident, of course—of gonorrhœal ophthalmia, and the loss of one eye. How often do we see young women entering upon marriage have their bright hopes for offspring blasted by a latent gonorrhœa in the husband. The almost constant results of gonorrhœa in women were ill-health, sterility and hysteria."

In the fall of 1899 I was requested by a medical friend to see a young lady, who had been married only a month, who was suffering from a severe acute pelvic inflammation. An operation was decided to be necessary to save her life, and she was taken that day to the Georgetown University Hospital, where, on the following day, I was compelled to remove two large pus tubes and also the infected ovaries. The disconsolate husband gave me the following history: Several months before marriage he had contracted gonorrhœa, for which my friend had treated him. Finally, when all symptoms disappeared, pronounced him cured and he, a few weeks later, "committed matrimony." After the first week of married life his symptoms all returned

and he did not hesitate to state that he must have unfortunately infected his wife, as she had symptoms very similar to his own. He was heart-broken over the calamity and freely asserted that if his wife died he would blow his own brains out. He was very bitter against his medical adviser, who had pronounced him cured.

I have in the same hospital two young women who have been operated on this month for gonorrhœal pus tubes, and am now treating a young lady, 20 years of age, who was married four years ago. She was taken with a severe "womb disease," as she called it, very soon after marriage. She gradually grew worse, was in bed two months, suffered terrible pains in the lower part of her abdomen, took a great deal of morphine and finally got able to be about again. She had no idea at the time of the cause of her illness, but about a year ago her husband confessed that he thought, when he was married, that he was entirely cured of a gonorrhœa, which he had contracted more than a year previously. His physician, he said, had not only pronounced him cured but had assured him that it was perfectly safe for him to marry, and that there was no danger of his communicating the disease to his wife. Within a week after marriage his symptoms all returned, with the result above stated. His wife has procured a divorce from him lately. She is a physical wreck, as well as a broken-hearted woman, at the age of twenty. Through her four years of married life she had never been pregnant.

Perhaps I have already said more than enough to emphasize and illustrate my contention that "latent gonorrhœa" is full of dangerous possibilities to the reproductive organs of women and will hasten on to consider the complications of gonorrhœa from an obstetrical and infantile standpoint.

To illustrate my statement that the profession has only recently realized the danger from the complications of gonorrhœa in women, and especially as a complication of pregnancy and the puerperium, I will state that I have looked through the index of twenty different volumes on obstetrics in my own library and only two mention the subject at all, viz.: "The American System of Obstetrics," published in 1889, edited by Dr. Barton Cook Hirst, of Philadelphia, and a "Text-Book on Obstetrics," by the same author, published in 1898.

In the volume first mentioned Professor Hirst rather combats the statements of Noeggerath and Sanger but admits the possibility of tubal and pelvic infection by the gonococcus during pregnancy and especially during the puerperal state. The danger of a mixed infection by the gonococcus and streptococcus are admitted and thought to be more frequent than by the gonococcus alone.

On page 631 of Hirst's "Obstetrics," published in November, 1898, just a little more than two years ago, the author says: "The frequency of gonorrhœal infection in the puerperal state depends upon the class of society to which the women belong. In the lower classes seen in dispensary practice it is very common. In the upper classes it is decidedly rare. Noeggerath and Sanger report that among 1,930 gynæcological cases, during a single year in private and polyclinic practice, 230, or 12 per cent., owed their sufferings to gonorrhœal infection. Among 398 pregnant women 100 had a purulent discharge, presumably from gonorrhœa (26 per cent.); 40 of the children developed (blennorrhagia)—a gonorrhœal ophthalmia. The poison of gonorrhœa can, without doubt, excite inflammation of the deeper tissues in this region and is quite certain, if it spreads through the tube, to light up a sharp attack of peritonitis. The consequences of gonorrhœa in the puerperal state may be of the most serious nature. While we attribute many cases of pelvic infection, in a general way, to puerperal sepsis, it is altogether probable that more cases actually occur after abortions than after labors at full term.

Dr. A. H. Burr, of Chicago, read a paper before the Obstetric Section of the American Medical Association, at its meeting in Atlanta, in 1896, upon this subject. I remember it very distinctly, partly, perhaps, because I was Chairman of the Section that year. Dr. Burr reported three fatalities after perfectly normal labor in primipara in which gonorrhœa was a clinical feature during pregnancy. In one of these sepsis developed twenty-four hours after delivery from the discharge of an extremely fetid tubal abscess into the uterus, when the detached *secundines* had freed the uterine orifice, resulting in general peritonitis, and death on the seventh day. The second died from recurring pelvic peritonitis and exhaustion, one month after confinement. The third, with no pelvic symptoms whatever, developed multiple arthritis with hyperpyrexia and acute systemic infection, which terminated her life, on the twenty-seventh day, from ulcerative endocarditis. Of the non-fatal cases the mothers all had acute metritis or arthritis, or both, with chills and pyrexia, and all the babies had ophthalmia, microscopically shown to be gonorrhœal.

Dr. Tyner, now of Washington, but until recently a resident in Texas, informs me that he was in charge of a blind asylum in that State at one time, and that his records show that there were under his care 1,700 cases of blindness. Six per cent. of these had their eyes destroyed by gonorrhœal ophthalmia among the white patients, and  $18\frac{2}{3}$  per cent. of black children were blind from the same cause, making  $24\frac{2}{3}$  per cent. in all.

In Norris and Oliver's recent "System on Diseases of the Eye," published in 1898, is a very thorough and comprehensive chapter on affections of the conjunctiva, etc., by Dr. Swan M. Burnett, of our Society. On page 189, Vol. III., he says, in speaking of ophthalmia neonatorum: "Like other forms of purulent conjunctiva, it, too, is one of infection, and, except in rare cases, from one definite source, the vagina of the mother. Some have thought it possible for the infection to have taken place *in utero*." Dr. Burnett does not contend that every case of ophthalmia neonatorum is one of gonorrhœal conjunctivitis, but he does say "that the infection comes from the vagina of the mother, almost without exception, is proved by the measures that have been instituted for its prevention and cure, the success of which is one of the greatest triumphs of modern scientific medicine."

This subject is so important that at the risk of wearying your patience I desire to quote another paragraph from so good and recent an authority, rather than to state the cases from the standpoint of a gynecologist, especially as it is quite in the line of my own argument upon earlier complications of gonorrhœa in women in this paper. "This is one of those diseases for which it can be claimed that absolute prevention is possible, and, with proper precaution, there need never be another case of destructive ophthalmia neonatorum." If this is true, and I certainly believe it is, why would not the same statement apply to the prevention of gonorrhœal pus tubes and ovarian abscesses, which are the cause, according to one authority quoted, of one-half the abdominal operations being performed in the world at the present time. Continuing, Dr. Burnett says: "What that means we can more fully understand when we call to mind that more than one-quarter of all the blindness of the civilized world, at the present time, is caused by this disease. (Magnus, Fuchs and many others.) Not only that, but the blindness, beginning as it does with life itself, so handicaps the person affected that instead of being a producer he remains, in all but a small number of cases, during the remainder of his life as a consumer only and a charge upon society. The loss to the commonwealth of the community from this cause is enormous, as a little calculation will show.

"There were in the United States, according to the last census, more than 50,000 blind persons, and the average percentage of the blindness caused by ophthalmia neonatorum is more than 25 per cent. (it varies from 15 to 50 per cent. in various statistics). We are certainly within the mark in assuming that 15,000 of these blind persons lost their sight from neglected sore eyes in infancy. Taking the cost of maintenance of a single person, according to the statements of our



best regulated asylums, as, at the least, \$132 a year and the average net earnings of a single able-bodied person at \$1.00 a day, we find that the total loss to the commonwealth of the United States from the ravages of this disease reaches the sum of \$7,500,000 *annually*."

This point would seem to be equally true in regard to all the other complications of gonorrhœa mentioned in this paper. Had this disease been cured in its acute stage none of these complications would have occurred and much suffering and untold sorrow been prevented.

The article above quoted goes on to declare "that it is unfortunately not asserting more than statistics amply warrant to say that had proper measures been instituted, at the right time, not one of these 15,000 cases of blindness would have occurred. The disease being one essentially of infection, and from a well-recognized source, its prevention is of practical, absolute certainty." This statement is practically proven by published statistics of lying-in-hospitals in Leipsic and Stockholm, where Professor Crede's method of treatment of the eyes of all the newly born with a solution of nitrate of silver was regularly and thoroughly practiced. Kosling published statistics in 1896 showing that among 17,767 cases, in which no preventive measures were used, there was 9.02 per cent. of ophthalmia neonatorum; in 24,724 cases in which a 2 per cent. nitrate of silver was used there only occurred 0.65 per cent., thus practically abolishing this disease from the list of complications of gonorrhœa in these institutions. On the well-recognized principle that "what man has done man may do again," this preventable disease may be actually prevented in the future.

The present King of England and Emperor of India once said, when, as Prince of Wales, he was presiding at a meeting at the opening of a new hospital for the treatment of preventable diseases, that he could not quite understand why the preventable diseases to be treated in the grand and costly structure they were about to throw open to the suffering public were not prevented? Very many of the laity are also harping on this point, and, as they are constantly becoming more intelligent upon matters medical, surgical and hygienic, an increasing number of very intelligent people are asking the same question which the Prince of Wales so pertinently asked—that is, Why are not the preventable diseases prevented?

We recently had a very public illustration of the failure to prevent diseases most emphatically and publicly declared to be preventable, both in this Society by an Assistant Surgeon-General and more publicly by the Surgeon-General himself in general orders of instruction, especially in reference to typhoid fever, dysentery and other polluted

water-borne diseases, and in spite of all the specific and scientific instructions to the contrary, what did we see? In the late Spanish war, lasting less than four months, while we had only 269 soldiers killed by the bullets of the enemy, we had more than ten times as many of our patriotic soldiers to die in camp and hospitals from diseases officially declared for the most part to be preventable. Why were they not prevented? No one for the moment thinks of blaming the Surgeon-General. He did all any one could do. The trouble lay largely at the door of the soldiers themselves and their officers, who were ignorant or careless of the laws of hygiene and self-preservation. This is one of the chief points I wish to lay stress upon and to bring home with great emphasis to the scientific hearts and consciences of us all. We have all probably been more or less careless or ignorant in regard to the probable occurrence of the complications following uncured gonorrhœa in women.

If the eye men can prevent the occurrence of 15,000 cases of blindness and the annual loss of \$7,500,000 to the commonwealth of the country, why can't general practitioners and the gynæcologists prevent so many pus tubes, ovarian abscesses, and pelvic infection from the same cause? This happy fruition may be as difficult of attainment in private and hospital practice as we have seen the prevention of preventable diseases in the United States army was in our recent war with Spain, but with the advancement of medical science we may, at no distant day, let us hope, accomplish very much better results than we are now, unfortunately, able to report.

#### *Treatment.*

I have no new suggestions to make in regard to the details of treatment. Every one here is probably as familiar with the subject as I am, and some probably more. The point, however, which I wish to lay the greatest emphasis on is that we make ourselves much more certain in the future than we have done in the past that our patients of both sexes are absolutely cured, beyond the danger of a relapse, before we dismiss them from further observation, control and treatment. Our female patients should be so vigorously treated as to prevent, if possible, the extension of the disease beyond the vagina and the external parts. The question of "latent, chronic or residual gonorrhœa," and its possible disastrous consequences, should be more constantly in mind when we are treating these cases, and our management should be so radical, thorough and complete as to prevent the

occurrence of pelvic infection and adnexal complications. These cases should no longer be left to the care of drug clerks, medical students and irresponsible persons to treat. Some hospitals still refuse, I am informed, to admit venereal diseases, and some physicians regard it as beneath their dignity to attend them. Patients are compelled, not infrequently for this reason, and also on account of the high charges of good physicians, to consult unskilled persons and the advertising quacks. One of the consequences of this unwise course is that they are only half cured, and the patients with this disease are permitted to go about thinking themselves cured, and some of them will undoubtedly contaminate innocent persons. Not a few writers, in the light of advanced modern science, speak of gonorrhœa as being a much more serious disease than syphilis, especially in women. The day has gone by when it can be said, as we have all probably heard it said, that gonorrhœa was less to be dreaded than a bad cold, and that the well-advertised "three days' cure" would render the care of regular physicians unnecessary, etc. The difficulty of a perfect cure has been recognized and emphasized by the most skilled specialists in this department of medicine. It is stated of Ricord, the distinguished French specialist, and author of a treatise on venereal disease, that, at a dinner in Paris, when the viands had been removed, and the speech-making time arrived, he, among others, was asked by the toastmaster to state his view of the punishments of hell that would be meted out to the unfortunate sinners who should be sent below. His reply was brief and to the point. He said that "no greater punishment could be meted out to him than to be compelled to review the procession and to hear the accusations of those he had failed to permanently cure of gonorrhœa." Our consciences, as well as our treatment, need revision in regard to the dismissal of gonorrhœal patients as cured so absolutely and permanently as to make marriage safe beyond the possibility of the contamination of the innocent wife. How long after the gonococcus ceases to be found by the microscopist in the urethral secretions or discharges can we safely give our professional sanction to matrimony? This is one of the burning questions of the day, and should be considered with the greatest care and conscientiousness. Dr. Joseph Price says there are more and better reasons for locking up in jail a man with gonorrhœa than there is to incarcerate a common murderer. In one case there is only one victim and that victim is dead; in the other there may be a dozen or more, doomed possibly to suffering and sorrow during the remainder of their miserable lives.

In the search-light glare and publicity of the scientific attainments

of the twentieth century let us try at least to lift this *opprobrium medicorum* from the shoulders of the regular medical profession, and so treat this disease that the sad complications which it has been the object of this paper to portray will no longer occur and its uncured victims will have no cause in the hereafter to rise up and curse our memory.

If the ophthalmologists can reduce, as they now claim they can, 25 per cent. of the blindness of the world down to a fraction of 1 per cent. by their radical preventive treatment, why can't we, by equally careful, thorough and radical preventive treatment, actually prevent the occurrence of the pelvic complications of gonorrhœa in women? I most earnestly hope we can and will in the not distant future.

926 *Seventeenth street.*

---

## ORGANOTHERAPY IN GYNÆCOLOGY.\*

BY WILMER KRUSEN, M.D.,

Instructor in Gynæcology at Jefferson Medical College; Assistant Gynæcologist to St. Joseph's Hospital, Philadelphia.

The animal extracts which have a particular interest to gynæcologists are the uterine, mammary, parotid, thyroid, and ovarian; and of these and their relative value it is my purpose to speak, hoping to elicit a discussion which may prove valuable to profession and patient.

Uterine extract, like ordinary muscudin, has never attained any prominence as a therapeutic agent, and although it has been employed for the relief of symptoms after hysterectomy it has practically fallen into disuse.

Mammary extract was employed by Bell in the treatment of uterine fibroids because of the close physiological relation between the mammæ and the uterus. We are all familiar with the effect produced upon the puerperal uterus by the process of lactation, and know how much more rapidly involution occurs in the nursing patient than in one in whom the mammary function is absent. Bell (*British Gynæcological Journal*, August, 1896) claims that "it is beyond dispute that fibroids of the uterus, as well as hyperplasia and flaccidity of the organ, can be most beneficially affected and brought under subjection by the employment of mammary glands of healthy animals," and that disease of the ovaries

---

\* Read before the Philadelphia Obstetrical Society, Feb. 14, 1901.



is also beneficially influenced by the same substance. Usually, however, he employs the mammary extract for uterine fibroids because the uterus and mammæ sympathize with each other; and administers parotid extract in ovarian disease because physiologically these two organs are related, as is shown by the frequency of metastasis between the two.

Shober (*Amer. Jour. Obstetrics*, September, 1898) has reported a series of fibroid cases, all women under thirty-five years—so that the menopause cannot be said to have had any influence upon the results attained—that were remarkably benefited by the mammary gland treatment. The tumors steadily decreased in size, and the general health of the women improved; menorrhagia and metrorrhagia ceased; the menstrual periods came at regular intervals; the bearing down sensations, the backache, headache, and general debility became memories of a painful past. He has also clearly shown the oxytocic property of this extract. Further clinical reports from other observers are few. Although in fibroid growths our surgical art presents such splendid chances for radical and permanent cure, yet the necessity for some substance like mammary extract is apparent for the treatment of those cases in which some marked contra-indication to operation is present.

In regard to the value of parotid extract in ovarian disease, gratifying results have been reported by Bell, Mallett and Shober. In cases of ovarian congestion when the ovaries were enlarged, tender and prolapsed, producing constant discomfort and pain with severe dysmenorrhœa, there was soon a marked amelioration of the symptoms. Two grain tablets of desiccated parotid gland of sheep, which is equivalent to about twenty grains of fresh gland, were administered three to six times daily, and within a few weeks a decided improvement was noted. The only contra-indication which Mallett had met with in its use was in cases of artificial climacteric, in which the flashes of heat and cold were distinctly made more frequent and severe. Still more extensive observation is required to corroborate the value of this agent, and to prove its superiority to old methods of treatment.

Thyroid extract is undoubtedly the most efficacious and most thoroughly studied member of this group of animal extracts. It has proven of signal value in the treatment of myxœdema and cretinism, and in those cases of exophthalmic goitre due rather to an altered than an increased secretion.

In psoriasis, eczema and many other cutaneous affections, it has been used as a stimulant to cutaneous functional activity with most satisfactory results. In fact it has been fully adopted into the medical armamentarium; and its usefulness to the gynecologist is becom-

ing more and more apparent. Bell has even employed it in carcinoma of the uterus after curettage and cauterization has been performed. Two interesting communications pertaining to the relationship between the thyroid gland and the genital apparatus in women have been made; the first by Fisher (*Wien Med. Woch.*, Nos. 6 and 9, 1896) in which he calls attention to the influence of the genital apparatus upon the healthy thyroid gland, as occurs at puberty, during menstruation, the puerperium, lactation, sexual excitement, the menopause and genital disease. He emphasizes the influence which a removal of part of the thyroid gland has upon physiologic and pathologic condition of the genital apparatus, and concludes: (1) that certain occurrences which influence the genital apparatus, such as puberty, pregnancy, and uterine fibroids, which produce a distinct change in the metabolism of the entire organism, very frequently cause an enlargement of the thyroid gland; (2) that the deficiency of normal thyroid secretion is often associated with atrophied change in the genital apparatus. The second report by Hestoghe (*Revue Med.*, January, 1899) establishes the fact that women deprived of the thyroid gland are subject to excessive menstrual discharge; as they grow older the menses last longer and finally become almost a constant flow. He also noted that an hypertrophied thyroid is always accompanied by an early and copious mammary secretion, and that thyroid extract is useful in stimulating the secretion of lacteal fluid, and should be administered when the secretion is diminishing. Hestoghe further believes that thyroдин is indicated in cases of frequent abortion in which the menstrual flow is so excessive that it sweeps away the impregnated ovum; he cites an instance of its advantage in sterility, and recommends its use in myoma, prolapsus, and uterine congestion.

Cheron (*Rev. med. chi. des Mal des femmes*, Nov. 25 and Dec. 23, 1896) also attests to the value of thyroid extract in threatened abortion with hæmorrhage, and in preventing the arrest of uterine involution after childbirth. He considers it a valuable galactagogue, stimulating the mammary secretion while it lessens the functional activity of the uterus. Jouvin has referred to the remarkable shrinkage of a fibroid while treating for obesity a patient who had a uterine fibroid. Leith, Napier, Polk and Shoher have also reported similar results along the same line.

Da Costa (*Amer. Jour. Obstetrics*, September, 1898) gives the history of three patients with fibroids reaching nearly to the umbilicus in each case, all of whom positively refused hysterectomy and improved under the thyroid treatment. The tumors became perceptibly more

movable and there was a marked temporary diminution in size. He recommends administering the thyroid extract in 3 gr. doses with  $\frac{1}{2}$  gr. ext. of nux vomica and finds that such a combination is not followed by any untoward effects.

Shober, (*Amer. Jour. Obstet.*, February, 1897) however, condemns the thyroid extract in myomatous uteri, because of the tachycardia and nervous depression produced, if a reasonable dosage is employed; but he has never found that the mammary product gave rise to any unpleasant or dangerous constitutional disturbance.

If the indications for operation are not urgent, a fair trial of these agents seems advisable; but their employment will, probably, never replace the radical methods of treatment. In the experience of the writer thyroid extract has proven of value in the amenorrhœa of obesity in several cases, in one of which the action was so striking as to make the case of unusual interest. Mrs. A. H., twenty-six years of age, had been married ten years, and had given birth to one child three years after marriage, at which time she weighed 140 pounds. After this she gradually increased in weight until Jan. 5, 1899, when her weight was 311 pounds. She had not menstruated since the birth of her child seven years before, and was subject to vertigo, hot flushes, backache, and profuse yellowish leucorrhœa. The bowels were regular and there was no urinary disturbance, but frequent bilious vomiting. Thyroid extract was prescribed four times daily and in three weeks her weight had decreased sixteen pounds; and Feb. 8th, when she began menstruating, her weight was 291 pounds, and headaches had ceased. The general condition continued to improve, and on April 1st the dose was reduced to ten grains daily. Her weight at this time was 277 pounds, and the menses continued regularly.

Montgomery (*International Med. Mag.*, November, 1900) states that he has found thyroid extract especially valuable in cases of myxœdema, obesity, and particularly in the treatment of some forms of sterility. That it has a marked influence upon the mucous membrane of the uterus is evident from its effect upon uterine hæmorrhage. In cases of hæmorrhage for non-malignant conditions, near the climacteric, thyroid extract is especially efficacious. It also has an influence in arresting the growth and promoting the absorption of fibroid growths. He was led to employ the drug in the treatment of sterility after having seen some cases in which women became pregnant after its use for the treatment of obesity. One patient lost seventy pounds under the use of the drug and immediately became pregnant. In another patient who had never menstruated, been married eight years,

the surgeon found that she had an enlarged ovary, removed it and punctured a number of cysts in the other ovary. Following this operation she began to menstruate and menstruated regularly. She was very desirous to have children; and at his suggestion, after menstruation had continued for a year, she began to use the thyroid extract and became pregnant, so that the next menstrual period did not occur. She gave birth to a child at full term and is again pregnant.

In studying the use of ovarian extract it is interesting to note the conclusions reached by Curatulo in regard to the internal secretion of the ovary: 1. The ablation of the ovaries exercises a considerable influence on metabolism. 2. The quantity of phosphates eliminated by the urine is notably diminished after removal of the ovaries. 3. The curve of nitrogen, after ovariectomy, presents a slight oscillation, without a very distinct tendency to elevation or to lowering. 4. After oöphorectomy the quantity of carbonic acid eliminated by the respiration, and that of the oxygen absorbed, diminish considerably up to a certain limit, from which time they remain stationary. 5. In animals from which the ovaries have been removed the curve of the weight is progressively elevated until it attains considerable proportions from five to six months after the operation. 6. When a certain amount of ovarian juice is injected subcutaneously into sluts deprived of the ovaries the quantity of phosphates eliminated by the urine, which diminishes considerably soon after the operation, tends to increase, and even to become superior to that which was ascertained before the operation; when still larger amounts are injected the quantity of phosphates increases in a very marked degree.

Hysterectomy performed in conjunction with oöphorectomy does not seem to cause modifications other than those ascertained after simple removal of the ovaries.

The author closes his essay with the following theory: The ovaries, like other glands of the animal economy, have, according to Brown-Séquard's general doctrine, a special internal secretion. These glands continually throw into the blood a peculiar product, the chemical composition of which is completely unknown, and the essential properties of which tend to favor the oxidation of phosphorized organic substances, of carbohydrates, and of fatty substances.

It results therefrom that, when the function of the ovaries is suppressed, whether because oöphorectomy has been practised or because these organs do not act, as is the case before puberty and after the menopause, there should be produced, on the one hand, a more considerable retention of organic phosphorus, whence there



is a greater accumulation of calcareous salts in the bones, and, on the other hand, the very manifest corpulency which is ordinarily seen after oöphorectomy or after the menopause.

This probably suggested the value of substitution therapy, the restoration to the diseased body of chemical substances the removal of which from the normal body gives rise to symptoms of disease. It is not necessary to review the various psychic or vaso-motor disturbances which are associated with the natural and the premature menopause; they are too well known to need further comment.

Werth, of Kiel, was the first who made use of the ovarian treatment in troubles which accompanied the disappearance of the secretion of the ovary following either the menopause or surgical intervention. Out of ten cases, in two only did the treatment fail to bring about any result; in the other eight there was a diminution of general pains, of the headache, of the loss of appetite and sleep, of the palpitation and of the feeling of anguish. Mainzer, of Berlin, obtained a considerable amelioration of the symptoms following double ovariectomy by administering to his patients the raw ovarian substance of the cow or the calf, in daily amounts of from 75 to 150 grains. It has been demonstrated that such large doses are not necessary. Mond has used it successfully in the disorders of the natural menopause and in amenorrhœa due to atrophy of the genital organs or to neurasthenia.

Spiliman and Etienne also obtained good results in chlorosis from the administration of the fresh ovaries of sheep, of the dried ovarian substance and of the ovarian juice. According to these authors this treatment acted by facilitating the elimination of the toxines, increasing the red globules, and causing the reappearance of menstruation. Mairet, Jayle, Touvenaint and Jouin have published observations in which this medication has led to favorable results in the treatment of amenorrhœa and chloro-anæmia. Guerder and Vigier have found the symptoms of the natural menopause were relieved. The latter, after freeing the ovarian substance from foreign matter, as fat, fibres, etc., mixes it with sodium bicarbonate and charcoal, which preserves it indefinitely without interfering with its therapeutic effects.

Bodon (*Centralblatt für Gynakologie*, August, 1897) reports three cases in which he employed ovarian tablets with good effect. The third was that of a virgin eighteen years old, who had suffered with epilepsy since her first menstruation and had been under treatment for years. Bromides and other drugs had proved utterly futile. She began with one tablet daily and increased the number to ten. In the course of several months the epileptic attacks ceased. Discon-

tinue of the drug was followed by fresh seizures and its resumption again caused their subsidence.

Jacobs (*Semaine Gynecologique*, June 22, 1897), although skeptical at the beginning of his observation, had confidence enough in the remedy to continue its use. The extract of the ovaries of recently killed animals was used, and he tabulated eighty-one cases, of which only five are classed as failures. In one case of obesity with amenorrhœa of nineteen years standing, the obesity diminished and menstruation became regular. Another patient twenty-one years of age, with undeveloped genitals, had never menstruated, but after taking ovarine extract for a month menstruation appeared and has continued regular ever since. Jacobs believes that suggestion plays a prominent part in some of these cases, but not in all. Landau (*Berlin. klin. Woch.*, Nov. 25, 1896) believes that this remedy does possess the power of modifying the unpleasant phenomena of the climacteric, whether physiologic or anticipated, without producing any evil effects, and that it deserves careful consideration.

Chrobak (*Cent. fur Gynak*, Nov. 20, 1896) administered ovarian extract made from the fresh ovaries of cows to a number of castrated women and had good results in two cases reported. Fosburg (*British Med. Jour.*, April 24, 1897) gives the history of a patient who at the climacteric was much troubled with frequent and violent flushing, the face often being in a burning heat while the hands and body were ice cold. Five grain platinoids of ovarian gland administered three times daily gave complete relief before three dozen were taken, and one platinoid given occasionally prevented recurrence.

Seeligmann (*Allg. Med. Centralzeitung*, Nov. 3, 1898) reports fifteen cases treated with extract of the ovaries of sheep and pigs, and concludes that the remedy has a decidedly beneficial effect, not only upon typical climacteric phenomena, but also upon the psychic condition and upon constitutional diseases, such as gout, psoriasis, etc., which after long remaining latent develop at the menopause. Bate (*Louisville Journal of Surgery*, Vol. V., 1898-99, p. 11) states that "the physiologic action of ovarian extract as now observed is vaso-constrictor, nerve sedative, emmenagogue, and anti-anæmic"; a combination of qualities which, if it truly possessed them, would make it a most valuable acquisition to our pharmacopœia.

Stimulated by such enthusiastic and gratifying clinical reports I began the use of ovarian extract, employing capsules prepared by a reliable firm, since the ingestion of raw ovaries or nauseous doses is not usually appreciated by the average American woman. For the past

three years, in selected cases, in dispensary and private practice, the effort has been made to obtain some definite result from the use of this carefully prepared ovarian extract, in three classes of cases: (1) Those suffering from amenorrhœa, dysmenorrhœa and other forms of pelvic disease; (2) those suffering from symptoms following the removal of the uterine appendages, for the relief of the vasomotor changes, the flushes and cardiac neuroses which with indescribable depression are so often produced by the premature menopause; (3) the disturbances associated with the natural menopause. My first case was that of an intensely neurotic patient suffering from artificial menopause. Marked relief was noted for a brief period, then there was a recurrence of the symptoms. Later the patient became an adherent of Christian Science, and has obtained more relief from auto-suggestion than from inspissated ovaries. Many other disappointing instances were met with. Patient after patient would faithfully take the extract to the exclusion of other remedies without any perceptible result, although occasionally the effect would be apparently so marked and the results so satisfactory as to encourage its further use. For instance, such a history as the following, taken from the case-book at St. Joseph's Hospital, would incite to renewed confidence in the efficacy of the preparation: Jan. 9, 1891, Mrs. A. C., aged 26 years, had had double ovariectomy performed by Dr. Joseph Price: general condition good, pelvic examination negative, but complained of hot flushes every few minutes and extreme nervousness. Five grain capsules of ovarian extract four times daily were ordered. The patient returned in three days stating that the nervousness was better and the hot flushes decreasing in frequency. In one week the nervousness had disappeared and hot flushes occurred only on exertion, two or three times daily. Another case in point was that of Mrs. J. W., patient of Dr. Chas. B. Smith, of Newtown, Pa., who was operated upon for double pyosalpinx. Within two months after leaving the hospital she began with the usual vaso-motor phenomena and relief was secured by the administration of five grain doses of ovarian extract three times daily. Time and a regard for your patience prevent my giving a detailed history of more cases; besides, the recital of our failures is never pleasant; yet it seems unfortunate that more of those who have been disappointed in their use of this product have not given their experience, as only a few seem to have done so. Montgomery (*International Med. Mag.*, November, 1900) states that he has never seen the slightest influence from the use of ovarian extract, although he has found the thyroid especially valuable in the treatment

of cases of myxœdema, obesity, and in some forms of sterility; and Baldy says that "a careful consideration of this subject forces one to the conclusion that it is destined quickly to follow in the steps of the testicular injections urged several years ago with the object of renewing youth." Johnstone, of Cincinnati, may give the correct explanation of the failure to secure more definite and satisfactory results from the use of ovarine. He says: "There is not an iota of proof that the ovary has any other function than the manufacture of eggs. The ovary is in no sense a gland. Its epithelium is arranged for the purpose of being cast out and lost, and is not placed so that its secretion, if it have any, could be absorbed either by ducts or blood-vessels. Anatomically, the ovary does not resemble the suprarenal, the thymus, or the thyroid gland. The thymus is a lymphatic gland, the thyroid and the suprarenal have a rich supply of blood vessels so arranged that each epithelial cell is closely approximated to a venous radical, thus providing for a rapid absorption of whatever secretion its cells may make. The ovary has a true duct, through which its epithelium, when cast out, passes off *en masse* to the outer world."

Probably Jacobs struck the keynote when he said that suggestion plays a prominent part in some of these cases; for this might explain why we have successes and failures under the same conditions, without apparent cause. Notwithstanding the many brilliant results referred to in this paper, experience leads me to the following conclusions, based upon the use of the American product upon American women: (1) The employment of ovarian extract is practically harmless, as no untoward effects beyond slight nausea have been noted even when full doses have been administered. (2) In the treatment of amenorrhœa and dysmenorrhœa no good results were secured. (Although in some cases of amenorrhœa of obesity, remarkable results have been obtained by the use of the thyroid extract.) (3) The best results were seen in the second class of cases, for the relief of symptoms of artificial menopause, when in a few instances the congestive and nervous symptoms were apparently ameliorated. (4) No appreciable result was noticed in the use of ovarine in the natural menopause. (5) No definite or exact reliance can be placed upon the drug, as it often proved absolutely valueless where most positively indicated. (6) It is extremely problematic whether, in those cases in which relief was noted, the effect was not due to mental suggestion rather than to any physiologic action of the drug. The neurotic type of individual demanding this treatment will often be relieved by any simple remedy.



(7) In these instances in which effects were noted, increase in dosage seemed to have little influence in maintaining the effect or preventing the patient from becoming accustomed to its use. (8) In conclusion, the theory which suggests the use of this extract seems to be at fault, and the administration of ovarine or ovarian extract is based upon a wrong assumption as to the function of the ovary. In organotherapy, the best results have been obtained from the use of the thyroid and adrenal glands, and the ovary in function is in no sense analogous to these organs. Its principal function is ovulation, and if any peculiar product is coincidentally manufactured the isolation of this product has not yet been accomplished.

---

### PREGNANCY IN UTERINE BICORNIS.\*

BY GEORGE H. NOBLE, M.D., ATLANTA, GA.

MRS. F. D. M. was admitted to my infirmary January 27, 1899. She was in the ninth month of gestation, and complained of having severe pains through the lower part of the abdomen since the fourth month of pregnancy, for which she had been taking large quantities of morphine and whiskey. In this way she would secure relief for a short time only. The pains returned at such short intervals that the frequency of the doses became a serious matter, necessitating the withdrawal of the drug, which was followed by spontaneous labor. Inspection and palpation of the abdomen disclosed nothing except that it was very prominent anteriorly.

There was no lateral distention or sulcus at the fundus to create suspicion, consequently nothing abnormal was suspected before delivery.

Labor terminated in a reasonably short time, on January 29, 1899. It was impossible to estimate accurately the number of hours on account of the persistence and violence of the pre-existing pains.

There was no effort on the part of the uterus to complete the third stage of labor, due perhaps to a deformity detected while resorting to Crede's method of stimulating the uterus and in extracting the secundines, the latter becoming necessary on account of inability to excite sufficient uterine contractions or to expel them by expression of the uterus. The deformity mentioned was a uterus bicornis, the

---

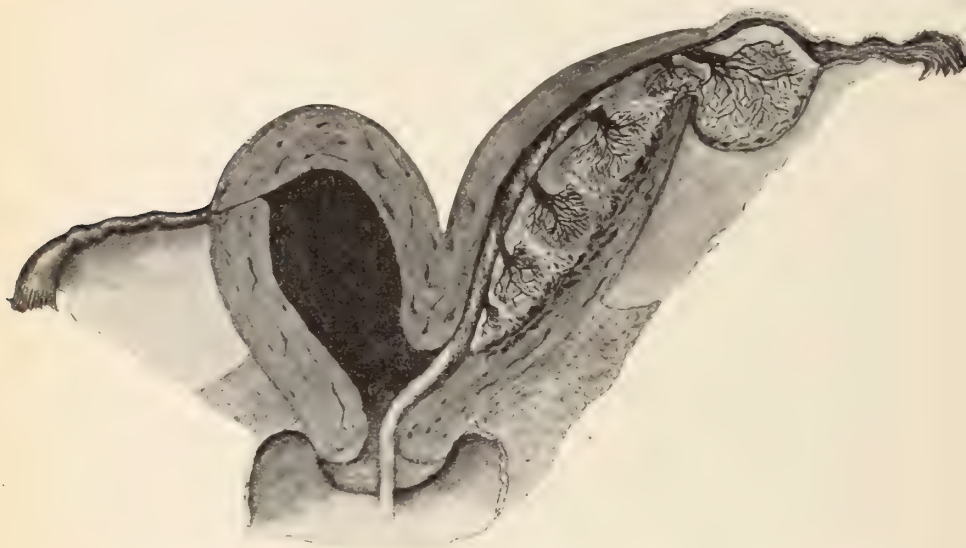
\* Read before the Southern Surgical and Gynæcological Association, 1899.

right horn of which had contained the foetus. The left horn was spindle-shaped, directed obliquely upward and outward, about twelve inches in length and eight in diameter, and was connected by a short, thick pedicle to the other part of the uterus just above the internal os. Introduction of the hand proved the right cavity to be empty except for that portion of the amniotic sac which enveloped the foetus. The aperture of the left horn was constricted and not much larger than the umbilical cord, which passed through it. The placenta entirely filled this part of the uterus, extending from the pedicle to the apex, and through it into the Fallopian tube. Removal of the placenta necessitated the introduction of the arm above the elbow and the passage of the hand to the extremity of the left horn, where I found an opening large enough to admit two fingers, through which the placenta protruded. My first impression was that the uterus had ruptured and that the afterbirth had extruded through the tear, but during uterine contractions the margins of the opening became round and smooth, thus dissipating the idea of a laceration. By pressing down the Fallopian tube upon the hand within the uterus I was enabled to sweep my fingers around the portion of the placenta projecting into it (the Fallopian tube), and found it adherent to the walls, from which it was separated by a sawing motion of the fingers. In forcing the globular mass into the cavity of the left uterine horn considerable expression of the tube was necessary, in addition to which traction was made by hooking the two fingers within the tube around the mass. After freeing the tube, clearing the secundines from the left horn was accomplished without difficulty. The contractions in the uterus then became normal, but the Fallopian tube filled with blood, which required removal several times and compression in order to stop bleeding. Before this was accomplished I seriously contemplated abdominal section and removal of the appendages on that side, as the condition was very similar to that of ectopic gestation with separation of villi, that is, liability to hæmorrhage and sepsis; and, as drainage through the uterus was free, I decided to await developments. Progress of the case was very satisfactory, with the exception of the tenth day, when the temperature went to 103° F., but subsided in an hour or two, after which there was no evidence of sepsis.

The placenta was shaped like two triangular pyramids placed base to base, with a globular mass at the apex of the upper one. The attachment being directly in the angle of the uterus, there were two planes representing the maternal surface and one the foetal. It was three inches through from the foetal surface directly back to the most

elevated portion of the maternal surface, its width was six and its length ten inches. The globular mass mentioned was about the size of a base-ball and represented the portion of the placenta which occupied the Fallopian tube. Evidently no distinct constriction or demarcation existed at the junction of the left horn and Fallopian tube, but, on the contrary, the deformity of the horn must have continued directly into the tube, producing a funnel-shaped canal, resulting in a very patulous communication between the two. Pregnancy must have occurred close on the uterine side of the abnormally large opening; the placenta, extending in both directions as it developed, became attached to each. (Fig. 1.)

FIG. 1.



Mrs. F. D. M.'s case. Fœtus was in right side and placenta in left side, extending into the left Fallopian tube.

The case of double uterus and vagina that came under my observation was Mrs. C. H., who had been recently married, and desired relief of very severe dysmenorrhœa. In the examination I found the double uterus and vagina complete, the left side having been dilated, the vaginal orifice of the other one was smaller and fringed with an annular hymen. The left uterus was the larger, yet both were well developed, with perfect cervix to each, except that the inner side of each was situated close together and attached to the vaginal septum between them. The latter was very thick, tough and complete, extending to the

meatus urinarius anteriorly, and posteriorly dividing the commissure into two distinct angles, one for each vagina. The septum between the vaginal orifices was one and a half centimetres thick.

Both wombs were dilated for the dysmenorrhœa, with relief. She became pregnant on the left side and aborted in the fifth month.

There were no features of interest in this event except that it was preceded several weeks by uncontrollable pain. At the time it was very noticeable that both vaginæ had been about equally dilated.

The importance of cutting down the septum was impressed upon her, to which she signified assent for it to be done later, but as usual it was delayed from time to time until pregnancy again occurred.

At her confinement, which occurred in May, 1895, the vaginal septum became a positive obstruction to the advancement of the foetal head, and as retraction and thinning of the lower segment of the uterus and adjacent portion of the vagina was taking place the septum was cut away. It was necessarily very vascular, as all who have performed operations in the vagina just before or during labor must know. Needle punctures would bleed alarmingly until the tissues were finally compressed by tightly tying sutures. The septum was clamped by two pairs of compression forceps, a ligature passed on the outer side of each, and the division cut between the instruments. The process was repeated step by step until the septum was severed completely. Immediately the head began to advance, and labor terminated naturally.

The third case, a resident of Calhoun County, Alabama, was a well-developed woman, thirty-four years of age, who had four children, all from the left side of the uterus. The other, or right side, not having been pregnant, was smaller. There were two distinct cervixes projecting into the vagina, the left showing marks of deep laceration. She had, prior to her first confinement, two abortions for which she could find no cause.

Of one hundred and twelve pregnancies in uterus bicornis the age was given in fifty cases, averaging twenty-seven and one-half years, only three reaching the age of forty.

They were pregnant upon the left side thirty-six times, upon the right side thirty times, on both sides (twins) three times. In two cases the foetus was in one side and the placenta in the other. There is very little difference in the sides impregnated; in fact, the deformity is just as apt to occur on one side as the other, consequently pregnancies must bear similar relations.

I find a record of fourteen cases only in which the decidua was



thrown off or was removed from the empty horn. While this is a very small percentage of cases, the question of decidua seems to have been overlooked in the reports; the natural inference is therefore that casted. While the passage of decidua is a corroboration of pregnancy ing of decidua is very likely to be more common than these figures in- it does not aid in making a distinction between the subject in question and tubal pregnancy. However, it is a subjective sign worthy of consideration.

There was menstruation or bloody discharge in eighteen cases, varying from a month to the entire term, accompanied by pain. At times free, and in a few additional instances hæmorrhages occurred without abortion, the blood evidently coming from the unimpregnated side. As far as I know this is not apt to occur in uterus septus.

Pain is mentioned in thirty-two of the one hundred and twelve cases. It is usually cramping, though sharp or lancinating pains are not uncommon. They usually occur when there is a bloody discharge (menstrual or otherwise), and about the third and fourth months when the pregnancy is in an undeveloped or pedunculated horn. They are the premonitory signs of rupture, and when such accidents occur they become very severe, cease suddenly, and are at once followed by shock, usually extreme.

Dysmenorrhœa is very common to this deformity, cramping pains predominating, the history of which should be regarded as one of the subjective signs.

The rapid distention of an undeveloped horn must necessarily cause much pain, due to overstretching of the thin muscular walls.

In uterus septus, or where the body of the uterus is not developed into two separate parts but the cavity divided into apartments by a septum, pain is not a feature. The septum rarely gives trouble, and then only as a factor in post-partum hemorrhage. Clinically the uterus septus need not be regarded a serious deformity.

The number and character of pregnancies are interesting studies. They show little danger in uterus septus, with the hazard gradually increasing as the deformity grows worse on down to rudimentary horns connected by pedicle.

Of eighty-four women there were one hundred and eighty-one pregnancies. Of this number there were one hundred and eight normal deliveries, which occurred for the most part in the cases with uterus septus, some becoming pregnant from five to twelve times, some aborting three to five times. But the abortions and premature deliveries occurred in the main in wombs of greater deformity. The

greatest period of liability was three to four months in the bifid uterus and rudimentary horns. When the uterus was better developed abortions did not occur until later in the period of gestation. Twenty-five cases were pregnant one time each, seventeen pregnant twice, mainly cases of bad deformities, a very wide difference between the two extremes of malformations.

In the undeveloped or badly deformed wombs one or more abortions preceded normal delivery. This is an evidence of the necessity of development before the capacity of the uterus can accommodate a full term foetus. This does not apply to uterus septus.

Twin pregnancies are more common than in normal conditions; just why this should be the case it is impossible to explain, for malformations can have no effect that I can see except in uterus diadelphys or duplex, where menstruation continues after pregnancy; in such circumstances impregnation of the empty side can and does occur, provided they have appendages sufficiently developed.

The position of the foetus is influenced by the lateral development in uterus septus and uterus bicornate, especially when the bifurcation is not low. One case in eight confinements had three transverse and one shoulder presentation. To normal presentations is the tendency in the rudimentary horn: the spindle-shaped sac necessarily forces the foetus in its long diameter.

The chief dangers are rupture and abortion, and, exceptionally, retained foetus. Sepsis follows any of these, and, where hæmorrhage does not destroy life, is a potent factor for serious evil. Death of foetus and infection of peritoneum through lymphatics, bloodvessels and by direct extension is not uncommon. Septic infection is a common cause of peritonitis, and is more likely to occur in the earlier months of gestation.

There were seven cases of retention of foetus, four for twelve, two for fifteen and one for eighteen months after death of foetus (Ebling's).<sup>\*</sup> Two reported as bicornate uteri, the other four as rudimentary horns connected by pedicle. It seems that pedunculated horns are comparatively free from common causes of infection, consequently retention may occur and remain longer than in any other condition of the womb. They more nearly approach the conditions of tubal pregnancies, especially the cases of solid pedicle or almost occluded communications. These are dangerous cases.

The greatest danger of rupture is at the fourth and fifth months;

---

<sup>\*</sup> Case 69 (Pfeffinger's) is said to have had retention of foetus in rudimentary horn for thirty years.

before and after that time it is very nearly equally divided. The earliest recorded period was fourteen weeks, the latest at full term; in the latter case rupture occurred before labor set in. Hæmorrhage is frightful, and usually terminates the case before surgical assistance can be had. Of the twenty-two recorded cases of rupture only one is mentioned as having recovered. In that case the horn developed between the folds of the broad ligament, and had neither tube nor ovary. It was a very thin sac, the tear occurring in the thin parts produced no hæmorrhage—thus one instance of recovery by surgical intervention.

The majority of these ruptures occurred in the rudimentary horn or horn connected by pedicle. In bicornate uterus or uterus septus, where the product can be extruded, abortion is more apt to occur when the development of the organ is not sufficient for the gestation to continue to full term, showing decrease in the danger of rupture as the deformities are less pronounced. Cramping pains sometimes precede rupture, but not sufficiently often to be regarded as a constant premonitory symptom; but when they do occur should not be passed unnoticed. The cause of such fatal hæmorrhage in rupture is the inability of the defective uterus or horn to contract and occlude the ends of the immense sinuses. They are not surrounded by a mass of uterine tissue as in normal pregnancy, but run through thin sacs invested poorly with uterine muscles; some of these in the thinnest parts contain no muscular tissue at all. For instance, one case had one side of the sac formed almost entirely by foetal membranes and adherent intestines. Rupture of a sac of this character when large bloodvessels are severed, must necessarily mean fatal hæmorrhage, as Nature is powerless to even modify the flow of blood for a short space of time, much less afford an opportunity for preparation and operation.

The character of deformity varies from simple septum uteri to a multiplicity of varieties of bicornate wombs, rudimentary horns connected with pedicle, and complete double uterus and vagina, including reduplication of ostium vaginae. Uterus bicornis is the term usually applied to all these, but designates in a general way only the kind of deformity referred to.

The great majority—55 per cent.—are known as uterus bicornis proper; 25 per cent. of the whole, or about half of these, being rudimentary horns connected by pedicles. These are the most dangerous from any standpoint, except that abortion does not occur in them so frequently. Even then serious complications arise from the extreme difficulty in evacuating the pregnant horn, hæmorrhage and sepsis

frequently following. Spontaneous abortion is mechanically difficult, due to the narrow pedicles, some of which are solid; in the latter abortion is impossible; rupture, internal hæmorrhage, sepsis, retention, lithopedion, are most to be feared.

Bifundal and simple septus deformities are not regarded as serious impediments to parturition, and form only a small percentage of these cases. I think, however, that they are more common than usually believed, for it is a condition almost invariably overlooked except when some accident or complication arises.

Uterus duplex occurred in 14 per cent., and half of these had vagina septus—that is, a partial or some attempt at formation of septum in the vagina. A slight development of this character may not be regarded as a cause of dystocia. Vagina duplex is a positive obstruction in most cases. The uterus was duplex, in 14 per cent.; in half of these the vagina was also duplex, and several required cutting away; some others were torn through by the advancing head. Hæmorrhage from the cut septum was excessive in some. In those that were torn bleeding was controlled by pressure of fœtal parts. When operating, the vaginal septum should be cut between ligatures, and these removed at the earliest day possible, to overcome liability to sepsis. It is safer to operate before labor comes on, as the edges of the mucous membrane can be brought together, thus preventing granular surface and liability to the dangers of the puerperal period.

In rudimentary horns the pedicles were solid in 14 per cent.; that is, no communication between the pregnant horn and uterus could be found. It is a question, however, whether they were really solid or not. Small canals must necessarily require a persistent search with the microscope, and then they may not be found. They may be so compressed by swelling or thickening of its lining mucosa after impregnation as to mislead or escape an expert microscopist. Again, pregnancy by migration of the ovum and spermatozoa in such a relatively large number of cases must mean that the peritonæal cavity is normally overrun with the spermatozoa in search of stray ovules, which, in their mad rush for safety, seek out and hide in vain within the deeper recesses abnormally formed. If the peritoneum possesses the power of absorbing the ovules from the ovary the process must be comparatively slow, or they would not have time to find and enter the defective Fallopian tube usually attached to the rudimentary horn. Again, pregnancy has occurred in rudimentary horns without appendages (Serejnikoff's case). The route of the ovule was through the Fallopian tube of the opposite horn; through the horn of that side into the

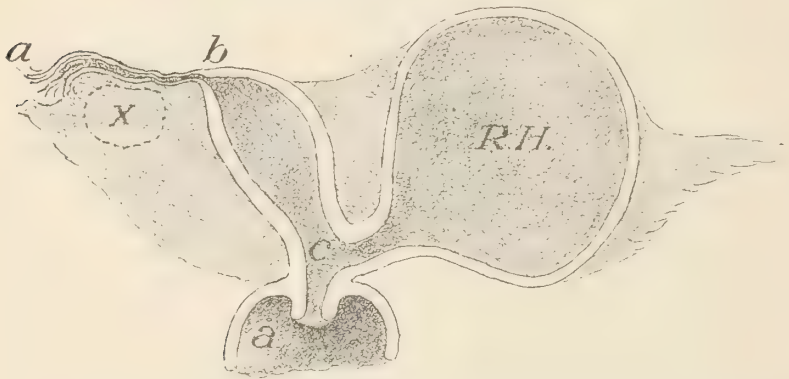


rudimentary horn, through its own pedicle. In such a case the ovule migrated, the spermatozoa having a direct route. (Fig. 2.)

While it has been generally believed that the power of movement possessed by ovules is limited and responds to the movements of cilia in Fallopian tube, or a movement in the direction of the cavity of the uterus, two cases (see also Hollander's case) show that it has passed from one cavity to cervix, and from there to a second cavity, or in an upward direction, traveling upon the epithelium very much the same as the spermatozoa.

When the pedicle is solid and the rudimentary horn has attached to it a perforate Fallopian tube, migration is done by spermatozoa—a thing harder to believe than the case above mentioned. If the sper-

FIG. 2.



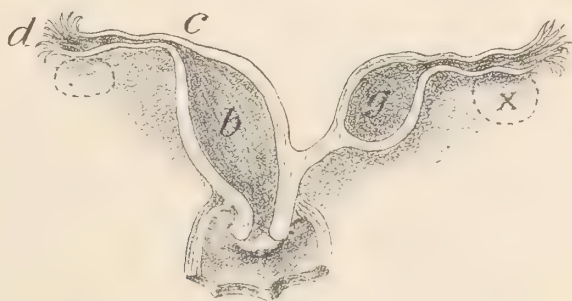
Ovule passed from ovary, *X*, through Fallopian tube, *a b*, into horn, *c*, and thence through the pedicle into the rudimentary horn. The spermatozoa passed from the vagina, *a*, direct to cavity of rudimentary horn, *R H*, where impregnation occurred.

spermatozoa have such a free access to the peritonæal cavity, the gonococci which are so frequently associated with it ought to be more often found on the surface of the peritoneum. (Fig. 3.)

The frequency of such improbable routes of ovules and spermatozoa would lead one to believe that the same thing would more often occur in a normal uterus, where ovary on one side and Fallopian tube on opposite side were removed. While this has been frequently done, pregnancy has been the exception. I am constrained to doubt the statement that such a large percentage of pedicles in above cases were solid, believing that sufficient search was not made in every case for open communications.

Open pedicles have been found in a smaller percentage of cases, contrary to expectations. In these the pregnancy occurred through the attenuated canal running through them. When the ovum was found in one horn and the placenta in the other the pregnancy occurred in the side containing the latter, and the fetus found its way into the opposite side by obeying the law of growing in the direction of least resistance—that is, it escaped from the placental side as the development of the after-birth forced it downward in the direction of the junction of the two horns, from which point its entrance into the side was in obedience to the law above mentioned. Occasionally a very short or defective horn forms a mere pocket near the fundus in which the after-birth or a portion of it may develop in such a way as to seriously complicate its removal. Hirigogen's case illustrates this complication

FIG. 3.



Ovule traveled from ovary, *X*, through Fallopian tube, *e f*, to cavity of rudimentary horn, *g*. The spermatozoa passed from vagina, *a*, to cavity of uterus, *b*; thence through Fallopian tube, *c d*, to peritoneal cavity, entering cavity of rudimentary horn, *g*, through Fallopian tube, *e f*.

beautifully. He found a small hole at the upper angle of the uterine cavity through which he could barely pass his finger. Into this the cord passed to the placenta within. Most dexterous attempts at removal were thwarted by the contractions of the uterus closing the small opening. In spite of the serious bleeding coming from this source, he was compelled to leave the expulsion of the secundines to Nature, which had a fortunate termination. Such cases as this have been mistaken for tubal pregnancy with escape of foetus into the uterus. Such propositions are only made by incompetent observers. The escape of fetus through the normal tubal orifice is a physical impossibility. Only in cases of imperfect development of one horn continuing into the tube, infundibuliform, can placental tissue grow through from

one to the other. The foetus would slip or move in the direction of least resistance, or the thin wall sac (tube). Thus, if the pregnancy occurred at the junction of the tube and uterus, the elastic pressure would force the fluid ball or foetal sac into the Fallopian tube. If it occurred on the uterine side, it would have a tendency to grow into the uterus. In that case it would not be an escape from the tube to the uterus, but a normal pregnancy. The location of the placenta must have some influence in directing the movement of the foetal sac in such cases, but in the normal uterus the tubo-uterine opening is not large enough to permit the development of the placental tissue. Pressure of the uterine walls would destroy the villi before they could grow sufficiently to affect the embryo, nor can the villi disturb the normal relation of the uterus and tube. In normal cases the Fallopian tube cannot contract with power enough to overcome the resistance of the uterine tissue and dilate sufficiently to force ovum through it. If it was possible, the necessarily violent contractions would destroy the life of the embryo and terminate the pregnancy, consequently the so-called escape of the foetus into uterus with placenta retained in tube is a hoax. They are impregnated rudimentary horns with the foetus growing through the large communication into the opposite horn.

I saw in consultation the wife of a physician whose case was similar to Hirigogen's, but not so decided. The left cornua formed a small pit from which a portion of the placenta had not been removed. Saprophytic infection was intense, and the woman barely escaped with her life. The condition was such that any one not on the lookout for anomalies might easily have fallen into the same misfortune as the physician attending the case.

The differential diagnosis from tubal pregnancy is difficult except in favorable cases. When the pregnant horn is pedunculated there is greater mobility of the sac. The uterine sound can be passed to differentiate when the pedicle or cervix is patulous, but is a dangerous practice. The formation of clots in Douglas' pouch indicate tubal pregnancy, for hæmorrhage from the other source is too severe to permit clotting before death supervenes. The chief diagnostic features must depend upon the objective sign. Exceptionally the bifid uterus can be felt through the abdominal walls with sufficient distinctness to make a diagnosis.

Most cases have passed unnoticed until after abortion or death, or were discovered on the operating-table.

After the fourth month the pregnant horn becomes spindle-shaped, rises high in the pelvis, and finally above its inlet; is directed obliquely

upward and outward, with few exceptions, and possesses the feel of a pregnant uterus. Contractions of uterus or pregnant horn are not reliable, especially in pedunculated cases; there is not enough muscular tissue to respond actively to gentle stimulation, such as rubbing or kneading. The continuance of life a reasonable time after rupture excludes uterus bicornis, and indicates tubal pregnancy. Infection and peritonitis without rupture (though exceptional) are more apt to occur than in the tubal form of ectopics.

Tubal pregnancies usually give a history of sterility. Cornual pregnancies occur for the most part in young married women or in early married life. This with the fact that bleeding or hæmorrhage takes place with severity more often in the latter, are the more important of the subjective signs.

The treatment will call for as many features as there are varieties of deformities. Uterus septus will probably not be recognized until after the second stage of labor; then retention of secundines or post-partum hæmorrhage will very likely be the means of its discovery. In an abortion of three months, where hæmorrhage persisted after evacuation of the uterus and firm uterine contractions, it became necessary to remove the septum. My object in this was to cut back to firm uterine tissue possessed of contractility sufficient to occlude the bleeding-points. In this instance it was successful, but I cannot say what effect a similar procedure will have in uterus at or near term. If the ordinary remedies for post-partum hæmorrhage fail, it may be tried, provided the patient is not already exsanguinated. However, it can be no little task even for skilful hands.

Forceps deliveries occurred in only a small percentage of cases, and were attended with very unfavorable results. Turning was relatively frequent in comparison to normal uterus cases. Eclampsia was mentioned only once.

In abortions, evacuation of pedunculated horn or removal of imprisoned placenta is extremely difficult. Not infrequently the pedicle or neck will only admit the finger, and contract so firmly and frequently that dilatation without an anæsthetic is impossible. Here the anæsthetic is imperative. When dilatation cannot be effected the fœtus, up to three and a half or four months, and placenta should be crushed or churned into a pulpy mass with the finger and squeezed out as so many clots. Ideal treatment when seen early, is the removal of the impregnated horn, as it not only relieves the existing difficulty but is preventive of future trouble.

Retention of the fœtus is rare and in its demands does not differ



from ordinary ectopic pregnancy, but is not devoid of hazard in its removal. The patient is safer without the dead foetus.

All divisions or septa in vagina should be removed as obstructions causing liability to retraction, thinning of the uterus, and rupture. It is best done in the early months or non-impregnated state, on account of sepsis if delayed until labor sets in.

---

## THE OPERATIVE TREATMENT OF CANCER OF THE UTERUS.\*

BY E. E. MONTGOMERY, M.D., PHILADELPHIA, PA.,

Professor of Gynaecology in the Jefferson Medical College; Gynaecologist to Jefferson and St. Joseph's Hospitals.

My consideration of this subject will be confined to the radical treatment. A few years ago, the conflict was between high amputation of the cervix and vaginal hysterectomy. To-day, it is between the latter and extirpation by the abdominal route.

Prior to the present excellent results obtained through improved technique and increased experience, the advantages were with those who excised the diseased cervix.

The occasional involvement of the uterine structures above the point of excision, the recognition that the individual who developed carcinoma possessed an inherent susceptibility to the disease, which was increased by the resultant cicatricial tissue and the periodical congestion induced by the retained ovaries, demonstrated the wisdom of complete extirpation.

By which route shall the diseased organ be removed? The vaginal and the abdominal incision each has its ardent champions and as usual, the truth lies between the two extremes. The condition of the patient, not the predilection of the operator, should decide the procedure. The primary requirements for the operation should be, first, incision of the organ within the limits of healthy tissue; and, second, safeguarding the wound from secondary infection or implantation.

The vaginal route may be chosen when the disease is plainly confined to the cervix or body, the uterus is not unduly large and freely movable, and the vagina is sufficiently spacious to permit of ready access. The incision should extend at least one-third of an inch beyond

---

\* Read before the Philadelphia Obstetrical Society, February 7, 1901.

the margin of diseased tissue, and the disorganized structure should as a preliminary be cureted, cauterized with the cautery, and shut off from the vagina by sutures. If necessary to accomplish this inversion, flaps may be dissected up prior to the use of sutures. After incision of the vagina, the dissection is extended laterally to remove as much parametrial tissue as safety for the ureters will permit, and the uterine arteries are isolated and tied separately. The fundus is turned down through the anterior fornix, the broad ligaments may be clamped and the uterus is cut away, after which the ligament should be crushed with an angiotribe and ligated with chromacized catgut in the groove thus formed. The angiotribe may be used and the temporary employment of the clamps avoided. A suture should be passed through each broad ligament and tied, after which the ends should be carried through the corresponding side of the vagina, to prevent its subsequent prolapse. The peritoneal surfaces may be united by continuous catgut suture and the vaginal wound loosely packed with iodoform gauze.

The vaginal operation offers the advantages of greater expedition in its performance, a more rapid convalescence, and greater freedom from pain.

Oddly enough, some of those who most highly extol vaginal hysterectomy for inflammatory conditions are most condemnatory of it for cancer. One ascribes the asserted greater frequency of relapse in vaginal hysterectomy than in high amputation of the cervix to the increased risk of the cancer cells or the specific germs being forced into the lymphatics, but such a conclusion seems more fanciful than real. If such a possibility is increased, what is to prevent the high amputation being the first step in the extirpation when the non-infected portion can then be removed without such a risk. In suitable cases, I believe no operation is superior to vaginal extirpation of the uterus, but would insist that the cases must be carefully selected, keeping in mind the primary requisites named, viz., excision in healthy tissue and protection against reimplantation.

The abdominal operation should be elected whenever the favorable conditions which we have enumerated as requisite for vaginal hysterectomy do not exist. In extension of the disease beyond the confines of the uterus, the destruction of the vaginal portion of the cervix, in involvement of the vagina, partial infiltration of one or both broad ligaments, where the uterus is large, and the disease is complicated by the presence of uterine fibroids, ovarian growths, or the uterus is fixed by previous inflammatory attacks, the abdominal incision should be favored. It should also be selected in the single or nulliparous woman.

The advantages of the abdominal procedure are mainly in the increased opportunity for removal of the parametrial tissue, enabling the operator to get farther away from the confines of the disease, the better opportunity to follow and inspect the ureters, decreasing the danger of their injury permitting their repair where injury has been unavoidable, and the greater security against hæmorrhage. Where an extensive dissection is required, the loss of blood may be avoided by early ligation of the ovarian and internal iliac arteries, which largely cuts off the blood supply to the pelvic viscera and renders the operation almost bloodless.

Much stress has been placed upon the advisability of the removal of the chain of lymphatic glands which are likely to be infected from the uterus. Fortunately, the lymphatic glands in uterine cancer are late in becoming involved. In my experience they are rarely involved when the case is an operable one. I do not believe their removal as a routine practice desirable as in hopeful cases they are not sufficiently often involved to justify the additional dissection and risk in their removal. The hysterectomy can be rapidly performed by placing clamp forceps upon the broad ligaments cutting between them and the uterus, carrying an incision forward over the bladder, and pushing down the flap including the bladder, the lateral tissues are pushed down and the uterine arteries are seized. The posterior fornix of the vagina is incised upon a pair of forceps which have been previously placed in the vagina and are pushed up by an assistant. Through this opening the cervix is seized and drawn up, while its vaginal attachment is incised by the scissors. An assistant is ready to seize bleeding vessels with pressure forceps. The clamped broad ligaments are crushed with the angiotribe and ligated in the groove with chromacized catgut. The peritonæal cavity is closed over the vagina with a continuous catgut suture preliminary to closing the abdominal wound. When the para-uterine tissue is infiltrated, it may be necessary to dissect out the ureters preliminary to the excision of the tissue to avoid its injury. Occasionally it will be necessary to resect the ureter in order to succeed in the complete removal of disease, when an anastomosis with the bladder may be established at a higher level. Should the anterior wall of the bladder be involved, a portion of it may be excised with the uterus. The entire bladder has been extirpated, the ureters connected directly with the urethra, with the vagina, or introduced into the rectum. Such operations serve to exploit the operator more than they are of service to the patient. The Kraske operation no longer affords any advantages in the extirpation of the uterus. It can be required in complicating rectal cancer only when the upper

part of the rectum is the site of the disease. The resection of the sacrum is rarely necessary, as the enlargement of the vagina, or at most the excision of the coccyx, will be sufficient.

In the consideration of the treatment it should be appreciated:

First, that an operation to afford hope of escape from relapse should be early.

Second, the vaginal operation should have the preference wherever the conditions will permit of its performance.

Third, every precaution should be exercised to operate in healthy tissue and avoid the possibility of reimplantation.

Fourth, the prognosis is much less favorable in women under thirty-five, quite favorable in women over fifty, if an operation is done early.

---

#### ANNE MURRAY.\*

##### The First Trained Nurse.

By ELY VAN DE WARKER, M.D., SYRACUSE, N. Y.

The best gift of God to man is man himself. The best we have in life comes from our touch with the humanity about us. The only glimpse we have of divinity, the only chance we have of making the higher and better spiritual life a part of our own comes from what we see and learn of goodness, devotion, heroism and purity of those among whom we live, or of those who have left us the records of their lives. We need the stimulus of this study of example. For this reason I shall tell you to-night the story of Anne Murray, whom I have called the first trained nurse. She lived and wrought out her destiny two hundred and fifty years ago. As one who was intensely and vividly human, who made mistake of heart and head, who was applauded and misjudged, but who never faltered in her devotion to humanity, and through all was sweet and pure and womanly, history fails to offer one more worthy of study and example.

Anne Murray was born on January 4, 1622. Her father, a Scotchman, was a confidant of King James and tutor to Prince

---

\* An address delivered to a graduating class of nurses.



Charles, afterward the king of unhappy memory. As the prince outgrew the tutor, he became secretary and friend and remained close to his side until Murray's strong Protestantism led to his opposition to the Spanish marriage, for which he was imprisoned in the Tower. It was not for long, as the prince's affection for his old tutor caused him to relent, and to compensate him he was given the post of provost of Eton College. Here he died, and Anne, an infant, was left to the care of her mother. Mrs. Murray, a kin of the Earl of Perth, had so tough a Scotch will that it deserves no other name than obstinacy, to whom Anne says she was "so observant that as long as she lived I do not remember that I made a visit to the nearest neighbor or went anywhere without her liberty." Anne was most religiously reared, as was becoming in the daughter of a Protestant Scotch house, so that she says "for many years together I was seldom or never absent from divine service at 5 o'clock in the morning in summer, and 6 o'clock in winter." No expense was spared in her education. She was taught to write, to speak French, play on the lute and virginals and dance, and a gentlewoman was kept to teach all kinds of needlework. Scarce had Anne reached womanhood when the Civil War broke out and brought sore distress to the family. Her brother-in-law, Sir Henry Newton, had his estates sequestered by Parliament because he had raised a troop of horse at his own expense for the service of King Charles. Lord Howard, with whom the family was intimate, had sufficient interest with Parliament to save a portion of Sir Henry's estate, for which Mrs. Murray felt a very proper gratitude, and this feeling of loyalty and gratitude to Lord Howard brought to Anne her first experience of how much sorrow life may have in store. The oldest son, Mr. Thomas Howard, fell in love with Anne, and failing in all attempts to see her alone, sent a young gentleman to acquaint her of his passion. It was a painful surprise and the envoy was coldly received. But the seeds were sown and the blossoms which bloom perennially in the human heart suffused her life in the fragrance of a maiden's first love. At last they met, "and what he said was handsome and short, but much disordered, for he looked pale as death and his hand trembled," but he had the wit to say, "If I loved you less I could say more." Lord Howard was in narrow circumstances and he had planned that Thomas should marry a rich citizen's daughter, for he could not settle his son and heir without impoverishing his younger children. Mrs. Murray was well aware of Lord

Howard's intention, and when the affairs of the heir and Anne became known there was an explosion in the two households. Mrs. Murray opposed the marriage with unrelenting obstinacy. Prayers nor entreaties could move her. As usual, the man proved the weak member of the coalition, and Lord Howard "did offer to do the utmost his condition would allow if Anne's mother would let her take her hazard with his son." But Anne's mother was not made of such pliable material, and like adamant she set her will against the match. Poor Tom expressed his intention to become a Capucin monk, much to the misery of poor Anne, but monk or not, Mrs. Murray would not allow the fortunes of the Howards to be in any way imperilled by any weakness of her own, and the first love affair of Anne was sacrificed upon the altar of necessity, where many another, both before and since, has ended.

This episode was the turning point in Anne's career. Treated coldly by her mother, and friends falling away owing to the desperate crisis in the affairs of King Charles, she took up the study of "surgery and physick" in connection with the art of nursing as it was then understood, and her tenderness and devotion to the sick soon made her known beyond the narrow limits of her home. We do not need stronger proof that the true nurse is born, not made, than the fact that this educated and high bred lady, at a period when caste placed an impassable barrier between the lady and the woman, voluntarily assumed the sometimes thankless and often repulsive duties of a nurse. To some is given the gift of living and enjoying this life. They live it somehow as the birds sing, or the flowers bloom, while it seems to matter little whether song or blossoms come at the bidding of warmth or sunshine.

This born nurse is nearly always a woman, and to her only comes this divine gift of personal ministration, and is limited by no creed, or clime, or people. Miss Murray "worked under the best physicians and cultivated their personal friendship so successfully that they did not think themselves slighted when their patients, even persons of the greatest quality, were wont to seek her aid in their distempers." With all this hard work and study her religious life became broader and deeper. She spent much of her time in devotion, and "searched for knowledge as for hidden treasure," and a contemporary remarked of her that "her piety had nothing of moroseness or affectation, but was free and ingenuous, full of sweetness and gentleness; her gravity had a grace and air so taking and agreeable as begot both reverence and love." Mrs.

Murray's health became such as to claim all her daughter's love and care, and the poor mother, who for so many months had treated her with coldness, doubt and suspicion, had her old love restored and her life filled with comfort and her heart with gladness and joy by her daughter's tender ministrations and the sweetness of her religious consolation. The mother died on August 28, 1647, when Anne devoted herself to the service of the distressed Royalists, who were in sore need, as the cause of the people rapidly triumphed under the sturdy blows of the great Cromwell. King Charles was to Anne his sacred majesty, to whom her life was passionately devoted and her service knew no limit. This ardent devotion to the royal cause made Anne an historical personage. Prince James, the second son of Charles I., was in the custody of the Earl of Northumberland, where he had been placed by the Parliament. The king was very urgent that the prince should be stolen. "I look upon James' escape as Charles' preservation," the king wrote, "and nothing can content me more." Anne's well tried devotion and her coolness and discretion led to her selection as an actor in this difficult enterprise. After a conference with Colonel Bampfield, a soldier in the secret service of the king, a plan was formed of disguising the young prince in female attire. She secretly procured the measure of the prince, and going to a tailor, ordered a dress for a young gentlewoman made of "mixed mohaire of a light haire colour and black, and the under petticoate of scarlett." The tailor contemplated the measure seriously and then declared that while he had made many gowns and suits for ladies he had never made one for a woman so very short and with such a very large waist. The enterprise, with the efficient aid of Colonel Bampfield, was brought off successfully, and the young Prince James, who afterwards became that most impractical inefficient king and the last of the Stuart line on the throne of England, was restored to his father.

This incident opened another chapter in the heart history of poor Anne Murray, and one that left its shadow over her after life. Colonel Bampfield did what another had done in regard to this beautiful woman—fell in love with her. But Colonel Bampfield was a married man, and while Anne's heart was untouched and her only regard for him was her admiration for his daring as a soldier, and his honest devotion to the king, he never ceased in their many meetings which resulted from their mutual devotion to the Royal cause to pour the tale of his love into her half reluctant ears.

It must not be supposed for a moment that Anne lent herself to this wooing without what to any woman was an ample justification.

Colonel Bampffield stated that his wife, who was as ardently devoted to the cause of the Parliament as he was to the cause of the king, which had led to their separation, was dead. Anne's station was so high and exclusive that Mrs. Bampffield was, in those days of rigid caste, so far removed from her that she could have known nothing of her personally; but if the colonel could be honest and devoted in one cause which was foremost in her heart, that of the unfortunate king, why not in another cause, that of the heart. The rough, forceful character of the soldier won in the unequal contest with this gentle woman. Her nature was atuned to sympathy, to help, to allay pain and sorrow; it was the keynote that once sounded, roused all the tuneful melodies that make music in the soul of a woman thus divinely endowed. I have sometimes thought that the best and highest development of this impulse has led women who had this temperament into dangers that arise from this overwrought faculty and to which other women were less liable. The true nurse has neither the faculty of loving, nor the need of loving, any more actively developed than any other clean hearted woman. Men and women, however, stand at the opposite poles of emotional life. The first seeks, demands, the latter consents. They are the incarnated form of the active and passive voices of the verb. Man says "I love." Woman says "I am loved." In this passive voice lies the danger. Man's gratitude and woman's admiration and devotion are only separated by a narrow streak of congested gray nerve matter. I do not say that man mistakes love for gratitude or admiration, but gratitude and sympathy earned in devotion to a common cause will arouse the strongest and most lasting affection. The only dangerous man to a woman's peace and happiness is one in whom she has inspired a genuine affection. Against all others she is protected by the impenetrable armor of a woman's indifference. I believe this to be the reason for Anne Murray's devotion to Colonel Bampffield. There were other things which inspired trust. While she saw political intrigue and treachery even in high places, she saw nothing but devotion to the lost cause of the king in this strange man. The advice and earnest solicitude of her friends could not turn her against him. They had the most indubitable evidence that he lied when he said that his wife was dead, but nothing disturbed the faith of



Anne. It is an unexplained fact in the heart history of man that he will be honest, true and devoted in all other things, and yet be false and treacherous in the one relation where truth and honor ought to govern. But fortunately Anne was too much absorbed in politics and nursing to think seriously of marriage, and that was all that honest love meant to Anne. Time proves all things, and none more certainly than the truth or treachery of man, and thus in the end was proven to her the villain that Colonel Bampffield was, and he passed out of her life. But the memory of her wrong and the sense of shame to the consciousness of her lofty womanhood never left her, and while her religious life and her devotion to helpfulness and charity were in no way changed, yet the shadow of what she believed to be a humiliation and a disgrace never passed away.

This unhappy incident but intensified her active interest in her chosen life work. Her fame as a nurse spread far and wide. Many high and low sought aid at her hands. Miss Murray soon found that to meet all the demands of a nurse she must know something of medicine and simple surgery, and she entered upon a course of instruction that in time made her so proficient that her fame went before her and her remedies were in great demand.

Doctor John Brown, in his "Spare Hours," tells us of the old crossroads doctor whose medical instinct made his remedies more certain to heal than all the skill of the most learned professor. He had the natal instinct of the healer. Some such special faculty must have been developed in Miss Murray, but with the broad distinction that it grew out of her character as a nurse, and not from any desire to exercise the calling of a physician. It was the limitation upon the use of her hands as a nurse that induced her to acquire some knowledge of simple remedies and surgery. There is no doubt that her quick brain soon convinced her that in the rudimentary state of medicine and surgery in those days nursing was more sure to heal than medicine, for no matter what the fame her remedies earned for her, we know her as a nurse and not as a physician.

And this opens up the question, not yet settled, to what extent the trained nurse, in order to perfect her technique and enlarge the field of her usefulness, must acquire practical medicine and surgery? This is one of the most unsatisfactory parts of a nurse's training. A little learning is a dangerous thing. To know the dose of opium, for instance, and to know that it will control pain,

is to know so little about it practically that it is exceedingly dangerous in the hands of one who knows nothing more. But if the career of Anne Murray affords only a partial answer to the question we may observe from it, that however practical her knowledge of medicine she was essentially a nurse and never a physician. This is one of the elements in the solution of the problem, namely, that the knowledge of medicine and surgery, whatever it may be, must never be such as to supplant or disturb her function as a nurse. And what did Anne Murray know of the medical side of her work? Very little indeed, for of the science of medicine, as we know it now, there had been taken but the first faltering step, that of the circulation of the blood, which had been demonstrated by Harvey but a few years before the same King Charles, who was Anne's political idol, and for which Harvey was receiving the scoffs and insults of his brother practitioners.

These were the days of the leech and the barber surgeon, and their remedies were just emerging from the mists of a superstitious empiricism. We know something then of the limits of her knowledge of medicine and surgery. I have no doubt that as a nurse she was in advance of the medical men about her. Surgery was almost a despised calling in England of that day, so much so that a doctor holding a degree from one of the universities would consider himself disgraced by the simplest act of surgery. We may be sure that this delicate and refined lady, strong in her pride of caste, never knew very much of this art. Probably a few lotions and simple dressings comprised all. Obstetrics belonged to the midwife, and we may be sure that she knew nothing about it.

The evil day for Anne came when London no longer afforded a home for a Royalist, and she made her way to Edinburgh. Here she was given a cordial welcome by the many Loyalists who had sought refuge there, and by many relatives of her mother. She met Charles II. at Dumfermline, with a host of others who adhered to the Stuart cause. The young courtiers in the train of the king paid but scant courtesy to the grave, gentle and shabbily dressed lady; but when the king met her and most graciously thanked her for the service that she had rendered Prince James and other members of his family the young gentlemen of the court began to pay her the most assiduous attention, whom, however, "she dismissed with some very caustic remarks."

The feasting and hilarity of the Royalist party was turned to mourning by the disastrous defeat at the battle of Dunbar. North-

ward into Scotland the routed army sought safety, and Anne fled with her friends. It was a heartrending time for our first trained nurse. Only a short time previous she had learned from Colonel Bampffield that he was a prisoner in the Gatehouse at Westminster and expected to be executed by Cromwell, and as if that was not enough she at the same time received letters from her sister and her brother that she was grossly deceived by the colonel. If she acquiesced in the wishes of her family she was but half convinced of his treachery, but her time was so taken up after the battle of Dunbar that she could have had but little time for heartaches. All along the line of retreat were wounded and sick soldiers that fairly incumbered the road.

She had provided herself with plaster and dressings and simple remedies. At Kinross she was surrounded by the wounded. Their wounds were in a terrible condition from neglect, and their clothing in an equally offensive condition. As she says of them herself, "none were able to stay in the room, but all left me." While she was trying to cut off a filthy sleeve of a wounded man's doublet a gentleman came into the room; he assisted her with his knife and threw the sleeve into the fire. He reported her heroism to the king, and she was mentioned in Council, and the result of Anne's devotion was all that she could wish, as an order was issued that in every town a place be prepared for the wounded and that allowance be made to "chirurgeons for attending upon them." Through that terrible retreat Anne never ceased in her ministrations to the sick and wounded.

When we stop to reflect upon the social condition of the period and appreciate the wide gulf that separated Anne Murray from the common people, that these poor sick and wounded men were regarded as clods upon the earth, and that armies went into the field with neither surgeons or material to care for the wounded, we are in a position to understand what her devotion to humanity really was. Her field of work was one untried and unknown before her time. Never before in all the histories of armies in the field was there the nurse to meet the horrors of sickness and of wounds, and that nurse a delicately nurtured woman, born to the purple and fine linen of the highest caste. She had no prototype, she was herself simple, modest, gentle; the first of womankind to give her life to the service of humanity under conditions that repel the hardest natures. She could do things with her own gentle hands that made the hardy soldiers turn with sickness and disgust. At

the time of her final return to Edinburgh, when the Royal cause was ruined beyond repair, Anne was thirty years old. In spite of her retiring disposition and modesty she was famous, "a woman beloved and trusted throughout Scotland." She was on intimate and cordial terms with the best of the nobility of the North, the Duke of Argyle, the Marquis of Tweeddale, the Earl of Rosborough, and bound by ties of noble service to the Earl of Dumfermline and his countess. It was with the latter lady, with whom she remained two years at Fyvil, that she did the greatest part of her nursing. It made no difference whether those who needed her care were Cromwell's troopers or king's men, they were all treated alike. Strong, indeed, must have been her nursing impulse that she could give the personal care of a nurse to men who had violated every law that in her eyes was either human or divine, and who had murdered "that true saint and martyr," King Charles the First.

War has always brought out the highest type of the nursing impulse. Florence Nightingale won her fame in the Crimea, and why fame comes to so few is not that so few excel, but that so many are at work and all work so well. In my own life as an army surgeon, I saw that even a drink of water given by a woman to a wounded man had more healing balm in it than when it came from the rough hands of a soldier nurse. I can overlook many shortcomings in the surgeon general's office during the Spanish war in view of the compensation given by a corps of trained nurses that were reluctantly sent into the field, and which by reason of the splendid service given will, I believe, be always a part of our regular army.

Among the many gentlemen who admired and respected Miss Murray was Sir James Halkett, a widower with two sons and two daughters. He was a man of the most chivalrous and honorable character. He paid court to Anne, but so humiliated was she by the Bampfild incident, that in spite of the solicitations of her friends, she could not bring herself to accept the attention of so honorable a man. She tried by argument to induce Sir James to seek some other lady, one who had not been so disgraced by an unworthy attachment, but at last, convinced that his children and her family were all anxious that she should accept his offer, she consented and became Lady Halkett. For twenty years Anne's married life lasted, and gave a perfect example of wifely happiness and motherhood. Four children were born to them, of whom only one survived her, a son named Robert. Lady Halkett lived twenty-three years a widow. She gave herself up in this latter period of



her life to religious work and literature. She published many volumes of meditations and prayers, which were widely read. Before her death she saw the final overthrow of the Stuarts and the settlement of a new dynasty on the throne of England. At the seventy-seventh year of her life the end came, in the peace that passeth all understanding.

I have given you this short sketch of the life of a remarkable and brilliant woman because I believe that she is the prototype of the noble army of women that 270 years after her has adorned by such splendid services the working side of the profession of medicine. I have called her the first trained nurse simply for the reason that aside from her humane impulse to aid the sick and the wounded she quickly saw that ignorant hands were of little use, and she acquired such a knowledge of medicine and surgery as was within the reach of a woman, and so far as it went in those days just such a training as nurses have acquired in these days. So far as this brings her in touch with the profession of medicine she is a unique figure in history.

The good one does in life lives after them. Acts of self-sacrifice and devotion are never made in vain, and those who so live inspire other hearts and make skilled other hands to do as they have done.

We cannot read the pathetic story of the life of Anne Murray without feeling that it appeals to us as something that belongs to womanhood, but as a heritage and a prerogative, and that neither education nor social surroundings can change it nor wholly check its growth. The spirit that would make such a life possible without being embittered by a sense of sacrifice or disapproval must spring from some of those qualities that make her instinctively a nest-builder, and is the ultimate cause of why woman is the gentle, loving thing that nature made her when nature fashioned woman in her divinest mould. And when, like Anne Murray, her life is embittered by disappointment and treachery it is not soured, but gives up its best in quick response to the demands of suffering and want. When a nurse has sought her career from motives such as these she is born to it, not made by study or training, or the need of an occupation.

George Elliot, in her "Scenes of Clerical Life," strikes the true note in such a life as this when she speaks of hospital work and at the sick bed as a refuge from intellectual doubt and as a recompense to the world weariness of soul that comes to those that give much and receive but little, and, is aptly illustrated when we find

---

Anne Murray after her marriage taken from her nursing by the cares of family, turn the same helpful qualities in the direction of a practical religious life that made all that she wrote as acceptable to those in need, as has been the work of her deft hands to the sick and wounded.

---

## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

---

## EDITORIAL.

### PLASTIC SURGERY IN GYNÆCOLOGY.

Perhaps we could choose no subject more apposite than this to the knowledge and attitude of gynæcologists of the present day towards this specialty. Owing to the secularizing, as it were, of gynæcology in recent years and to the great influx of general surgeons toward the ægis of this specialty, the lines of demarcation between it and general surgery have become very vague. This is a pity because no branch of medicine and surgery (for gynæcology partakes of both) is more truly a specialty and demands for its effectiveness more thorough specializing than does gynæcology.

To the average practitioner gynæcology to-day means little more than the ability to open the abdomen in woman and to practice general surgery and apply general surgical methods to the contents of her pelvis. Added to this the practice of gynæcology, in the popular medical mind, also includes the application of general surgical rules to the cervix and for the obliteration of a so-called rectocele and cystocele in the vagina. These latter operations, however, are practically side-issues—its really practical and interesting work is surgery upon the abdominal and pelvic contents. The so-called gynæcological surgeon is, therefore, in fact and practically a general surgeon for women.

But this is not the specialty of gynecology. The training of an abdominal surgeon neither includes nor demands any special knowledge either of the mechanics or physiology of the contents of the pelvis. His aim is not to conserve or to restore but to excise. The least of his efforts is to compromise.

But there is a *specialty* of gynecology so important and so brilliant in its results that the general surgeon is absolutely excluded from participation therein. Its aim is contradictory of those of the general surgeon. It is to conserve and to restore by returning those organs which have been injured to the anatomical state and to the condition in which they were before injury took place.

To attain this aim it is necessary that the gynecological specialist shall have devoted years to the study of special anatomy, pathology and therapeutics and to the perfecting of operative technique in its application to special conditions and special instruments.

This *specialty* of gynecology is therapeutics and plastic surgery. These are inseparable, they must be understood and practiced together; for the knowledge and practice of one without the comprehension and practice of the other render each unavailing. And this fact alone would exclude the general surgeon from the specialty of gynecology; for the practice of therapeutics as a distinct and equally important measure of treatment is excluded from his training and habit of thought.

There is a crying need to-day for *specialists* in gynecology. The same diseased conditions exist now as prevailed formerly and the general public will not much longer remain patient under the general surgical methods of treating the injuries received in childbirth. Both husbands and wives will learn to object to the so-called advantage of removal of the uterus in order to obviate a simple complete prolapse of that organ and the average surgeon who feels it would be profitable to add that of gynecology to his general practice will begin to realize that it is not only difficult but dangerous as well to "rush in where 'wise men' fear to tread."

---



## CORRESPONDENCE.

## SPECIAL JOURNALISM AND THE GENERAL PRACTITIONER.

We have received the following letter in regard to our correspondence with Dr. Breuer in the January number of this JOURNAL:

KEYPORT, N. J., February 26, 1901.

*To the Editor of the American Gynecological and Obstetrical Journal:*

SIR:—The letter of Chas. H. Breuer, M.D., was read by me with some interest. I am in general practice, town and country, near New York. Have been a subscriber to your JOURNAL for at least six years. It has been a great help to me. Living near New York I am much beholden to specialists for much kindly advice and assistance, and feel like expressing my gratitude to the JOURNAL, and specialists, after reading that letter.

My qualifications were about the average of a man graduated eighteen years since, supplemented by a pretty good library, accumulated little by little, and the best journals I could get. By hard work I have kept those dependent on me comfortably, and even though there is a "tendency toward specialism," have not found my practice falling off. Not "whenever there is a severe case," but when I find after careful study of a case that the case does not progress as I should like it, much benefit is derived for both patient and myself by consultation or sending patient to a specialist. New York "swarms with all kinds of specialists," "they publish their papers in the journals," and by reading them carefully I become acquainted with the specialist, weigh his ideas and methods of treatment, and decide on my specialist. The retention of that specialist's services is decided by his treatment of my patient and the benefit that patient derives from the consultation. Sadly disappointed have my patient and myself been by some specialists, of newspaper notoriety, generally. The specialist examines the case, confirms or upsets my diagnosis, as his views of the case decide him, refers the case back to me, with advice as to treatment. If treatment is something that I am able to carry out, I do so; if operative, there is hardly a patient but would prefer to have the family physician do the work if he could. Whose fault is it I cannot do the work? Nearly always the general prac-

itioner decides whether the work shall or shall not be done, if his patient has any confidence in his ability. To-day a patient returned from a specialist, very much pleased with the specialist she visited, and asked me to do the operation home. Her chances, I am sure, would be better with the specialist. Not being able to have the specialist come to her, she goes to the specialist, who, I am sure, will give her good care, and is paid almost nothing for his work.

The text-books tell the general practitioner what treatment to follow. The specialist journal enlarges very much upon that treatment. My patient could be treated here, year after year. From past experiences I can almost surely promise her health after the proper operation, skilfully done.

Patients want to get well. Within the past week have called into service an orthopædic surgeon, another surgeon who has done work on eye, nose, and throat in as many different cases, and a gynecologist. Patients are all satisfied, and I call them my patients still. I find time to read methods of doing "great operations," and form an idea of the value of those methods, too. The family physician is finally consulted before the operation. These relations must be satisfactory to the specialist. I am treated well by them; they are satisfactory to me.

R.

---

#### A DIVIDED PROFESSION.

March 12, 1901.

*Editor of the American Gynecological and Obstetrical Journal:*

SIR: The editorial in the February number of your JOURNAL should interest the profession throughout the State. It is most unfortunate, and in a way humiliating, that the profession of this great Empire State is divided, and that 80 per cent., among whom are some of the brightest men in the world, should be ostracized by the A. M. A. and that fact vauntingly published all over the world.

In your editorial you attempt to show that the New York State Medical Society is in the right because homœopathy has survived, even if modified. However, majorities rule, and surely, when the medical profession of the United States believe that the ethics of the New York State Society are wrong, it is fair to assume that the personal element is eliminated. Personally, I believe the original trouble in the early '80's was the outcome of selfishness. You must agree with me that it is a matter of considerable moment to the specialist how wide his field is, and naturally there is a direct ratio between

the possibilities of the specialist and the capabilities of men from whom the work comes: the broader the field of any code, the better for them.

So, while I believe the above is a fair criticism of the society, the association (of which I am a member) will not be prone to take the initiative in a union of forces; while some of the members of the association find re-organization a good medium for personal advertising.

If you succeed in ultimately fusing the two organizations, you will have done the profession of New York State a great good. The New York State Medical Society should change its by-laws in relation to the admission of members. To illustrate: there is no Saratoga County Society; if one were to be formed, with twenty-five to thirty physicians, we would not live long enough to all become members of the State Society. It is wrong for a man of good standing in the profession not to be eligible for membership in the State Society, and it is equally wrong for a State Society to have by-laws that engender feeling and strife when the delegates are selected from the County to the State Society.

I trust you will continue with the subject until your purpose shall have been accomplished.

DOUGLAS C. MORIARTA, M.D.

---

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL  
SOCIETY.

Stated Meeting, February 7, 1901.

The *President*, JOHN C. DACOSTA, M.D., in the Chair.

*Organotherapy in Gynæcology.*

BY WILMER KRUSEN, M.D.

(See page 211.)

DISCUSSION.

Dr. JOHN B. SHOBER: Mr. President and Gentlemen:—It has been a great pleasure to be present and to have heard the very interesting and instructive paper of Dr. Krusen. When, sir, I accepted your kind invitation to take part in the discussion I did not know that I was going to be called upon to open it, else I would have entered a strong plea that some one more capable than myself might have been selected.

Inasmuch as I have had a little experience with the use of two of the extracts referred to, I am glad to have an opportunity of indicating the class of cases in which I have found them to be useful. I refer to the mammary gland of the sheep and the parotid gland of the ox. I employ them in quite distinct and separate classes of pelvic disorders. The mammary gland controls menorrhagia and metrorrhagia and stimulates the uterine muscle to contract. It may, therefore, be used in all conditions of sub-involution. The parotid gland, when given throughout the intermenstrual period, will relieve a dysmenorrhœa due to ovaritis, and is to be used in cases uncomplicated by chronic inflammatory disorders. The idea which led to the use of the mammary gland was the physiological relationship between the mammary gland and the uterus in pregnancy and lactation, and the early changes of puberty. It was therefore thought that the mammary gland might have some effect in the relief of certain symptoms dependent entirely upon disturbances of the uterus. The same idea led to the use of the parotid gland in disturbances of the ovary, *i.e.*, the metastasis in mumps and the relationship which seems to exist between



the parotid glands and the ovaries in the numerous cases of parotitis, following pelvic and abdominal operations. Therefore, in 1897, I had prepared for me a desiccated powder of the mammary gland and also of the parotid gland, of such strength that each grain of the dry powder equaled 10 grains of the fresh gland. Tablets of 2 grains each were prepared from the powder. The proper dosage was found to be three, six, or eight tablets a day, this being the equivalent of 1 dram to 1½ drams of the fresh gland. I began using the mammary gland in a certain definite class of cases, and chiefly for the control of menorrhagia. The mammary gland seemed to act upon the uterine muscle, causing it to contract, thereby diminishing the blood supply to the organ, and in that way controlling the menorrhagia and metrorrhagia, which so frequently complicates cases of uterine fibromata. The intervals between the menstrual flow will gradually become lengthened, so that the patient will in time menstruate normally. I feel that the result is due to the action of the gland upon the uterine muscle, causing it to contract. How this is done I do not pretend to say. There must be some active principle contained in the mammary gland which may account for this.

Sturrock, of Edinburgh, says that there is a nucleo-proteid in the cells of the mammary gland which is of a highly complex composition, containing a nuclein, a carbohydrate and proteid radicle. It may be the antecedent of caseinogen and lactose. It contains a true nuclein, whereas caseinogen is a pseudo-nucleo-albumin. The nuclein bases are not excreted, but seem to remain in the gland, probably in the nuclei of the cells, as active agents in the formation of more mother substance.

These nuclein bases, which Sturrock says are not excreted, may possibly contain the active principle upon which depends the usefulness of the gland when employed as a therapeutic agent.

I have found no untoward systemic disturbances from the use of the mammary gland. That was the reason that I changed from the thyroid to the mammary. There is a difference, too, in the way the thyroid and the mammary act in these cases of fibroid tumors. The mammary gland seems to act only upon the muscle tissue, whereas the thyroid acts upon the epithelium and the connective tissue, as shown in myxœdema, cirrhosis, and many skin diseases. Possibly the thyroid gland acts upon the epithelial membrane of the cysts that are contained in some of these tumors, and upon the endometrium. The mammary gland, acting upon the muscle, diminishes the blood supply, and thereby causes diminution in size of the tumor.

I have found the parotid gland valuable in controlling ovarian pain. I cannot explain why this should be so, but many a case, suffering for years, has been relieved by the continued use of parotid gland. The usual treatment for ovarian dysmenorrhœa is unsatisfactory. I think if these cases are properly selected, and parotid gland used, the results obtained will be gratifying. A careful selection of cases is, however, very important. When we find in cases of this nature, by digital examination, only prolapse or somewhat enlarged and exquisitely tender ovaries, parotid gland powder is indicated, and will give very satisfactory results.

Dr. H. A. HARE: I feel rather awkward in the position in which I find myself to-night, because, after all, I have had practically no experience whatever in treating the various pelvic conditions in which these various animal glands have been employed. I came here at the request of the president, to present, rather the theoretical than the practical side of the question. Since thinking over the matter, several points have occurred to me which seem to have some bearing upon this interesting subject.

The first point which occurs to me is the question as to the relative activity of the mammary gland which is obtained. The mammary gland, as we all know, is exceedingly active at one period and exceedingly inactive at another. It seems to me almost inevitably necessary, in attempting to obtain definite conclusions concerning the value of this substance in its physiological action, that the experimenter should have some knowledge of the condition of the gland in the animal before it is removed; whether at the time the animal is pregnant, or has been for weeks or months not pregnant, or whether pregnancy has been ended, or lactation been ended a short time before. That a variety of results have been reported by the employment of ovarian or other glands in the treatment of various symptoms perhaps rests upon the very important influence of suggestion. We have positively no knowledge of the minute nervous changes which take place in women who are manifesting this peculiar array of symptoms. There is no department of physiology more cloudy than this, unless it be that in which some of the neurological problems have been advanced in this hall concerning the neurons and the axons. It is probable that symptoms in one patient are due to an entirely different condition of affairs than that in another. For instance, we find one type of diabetes mellitus which can be much benefited or cured by pancreatic extract, but the vast majority of such cases get no benefit from this remedy at all. Further investigation shows that such cases which are benefited are

those in which the pancreas is diseased. It is possible, it seems to me, that various conditions will produce a train of symptoms which we are not, as yet, keen enough to separate, so far as causation is concerned.

Another fact which, it seems to me rather militates against placing too much reliance upon these remedies, is the fact that if we go into the literature of medicines we will find hundreds of reports which tell us that physicians get the most extraordinary effects in all these conditions from the administration of inert substances like viburnum mixtures. It is extraordinary the results that honest men will tell you they obtain.

Then, again, it seems to me that the employment of the parotid gland in the treatment of pelvic conditions is going pretty far afield to get a remedy. The fact that there is no further connection anatomically or physiologically between the parotid gland and the ovary than is evidenced from the fact that a woman with mumps sometimes develops ovarian inflammation, is a pretty long stretch for rational therapeutics. We know that the infection of mumps has a predisposition for the tissues of the ovary and for the tissue of the parotid, which, however, does not show that these glands are physiologically associated. We hear, too, of the employment of ovarian extract for the purpose of relieving a good many of those symptoms following the removal of the ovary or uterus, and with the idea of favorably influencing carcinoma of the breast. It is not proven that there is any physiological secretion by the ovaries which influences carcinoma of the breast. We frequently see cases of extraordinary emaciation of all the muscles, with nothing the matter with the nervous system in the sense of organic disease, the wasting occurring reflexly through the nerves as the result of arthritis. As soon as the arthritis is cured the muscles regain their size and vigor. No one would think of giving joint extract for atrophied muscles under these circumstances. Therefore, I say again, it is possible that the ovary exercises an influence through some nervous pathway by an internal secretion. Until gynecologists and others are able to make a more nice and careful differentiation between the symptoms and causes of the symptoms of artificial and natural menopause we shall not be able to employ these remedies in a very rational way.

Dr. J. M. BALDY: Dr. Hare has been so candidly critical that I am afraid he will make himself unpopular. I am in pretty full sympathy with all he has brought before us theoretically, and from my observation I must admit that this is warranted pretty fully by practical expe-

rience. We are told by all the gentlemen who use these animal extracts to be careful in the class of cases in which we use them; for instance, as you have heard, in fibroid tumors which are not suspected of having undergone cystic degeneration, which have no complication of ovarian or tubal disease, they are applicable. Will you tell me, then, to what class of fibroid tumor the treatment is applicable, for that covers pretty much the whole field. The vast majority of fibroid tumors of the uterus are complicated in one of these two ways. The disease is a general one, often involving the whole genital tract, ovaries and Fallopian tubes. The Germans tell us they involve the heart. Unquestionably fibroid disease of the uterus is a general disease, in the sense in which I put it; that is, that it is not confined alone to the uterus.

We know perfectly well that if we examine fibroid tumors to-day and examine them three months later we will feel nodules which are not discoverable to-day. It seems to me that it is just this oversight, the overlooking and not paying enough attention to the details of this character, which leads us astray in many of our observations in medicine and gynaecology. I have charge of three clinics, and have instructed my assistants to use the various serums at various times in all of them. It is a curious fact that honest men will observe different things. I find notes on my clinic books in regard to these results and, on seeing the patients and questioning them, I would not recognize them as compared with the results recorded on the books. I cannot get the results which my assistants think they get, even from some of the same patients. As Dr. Hare said, the activity of the mammary gland at the time of the serum being obtained should be taken into consideration. The field of application of the serum-therapy is very limited. There are certain results which occur which are hard to explain; certain things will take place in certain patients at a certain time without anything being done at all. It is fair to take that into consideration with any drug we use.

I have given thyroid extract in hæmorrhage as a last resort. Once or twice I have been rather astonished at the result. The results in a positive way were confined to hæmorrhage, and that confined to nulliparous women. In one patient, who had bled irregularly for six months, at the end of one week there were the most brilliant results. In a short time she was bleeding as before. I suggested curetting, which was done with good effect, but followed later by hæmorrhage. I then suggested hydrastis. Again she did not bleed for a week. I have tried the drug in cases of nurses, with whom irregular bleeding



is very likely to take place in the beginning of their period of nursing in institutions, and the results have been gratifying. I do not recommend the drug as being a cure. I simply say, however, that I have had this experience, and in some cases I would repeat the remedy. I have commenced with a dose of 3 grains, and run up to 5 grains three times a day. It may be that suggestion had considerable to do with these cases. Not infrequently this will be the fact in cases of this kind. If the nervous system is at fault women are peculiarly amenable to suggestion. To this extent only have I ever had any positive results with serum.

As far as preparing patients for operation, I have not the slightest faith in it. Patients come to me to-day, and to-morrow at noon operations are over. I discourage preparation on account of the mental influence upon patients, doctors, and friends. In operative cases I would not only discourage the drug, but should never tell the patient that any such drug existed did they not know.

Dr. RUSSELL: I scarcely think that there is anything further to be said. Dr. Hare has brought the theoretical points so clearly before us in regard to these drugs, and I must say that practically my experience has been about as Dr. Hare has expressed his views, theoretically; that is, that they have been useless. My experience has not been a broad one, because I felt so strongly that it was such nonsense without knowing the real action of the drugs. The doctor associated with me in the dispensary has kept a record of cases treated thus, and we have a certain number of patients in whom the results are very interesting. That is as much as can be said in regard to this method of treatment.

There is one member of this group which the doctor has not spoken of; that is the suprarenal extract. I had occasion to use it last fall in a patient who had been under treatment for nine months for renal epistaxis. In this case the result was most gratifying. I am told that it is the most powerful astringent known. From the injection of half an ounce of 10 per cent. solution the hæmorrhage was arrested within a few hours, and there was no return for nearly three months. The result was very interesting, but I cannot say that the same thing would occur in another case. The man soon gained in weight, and is in perfectly good condition to-day.

Dr. E. E. MONTGOMERY: This whole subject of the employment of these organic drugs is one of exceeding interest, and it seems to me is one which foreshadows possibilities. It is difficult at present to differentiate the class of cases in which we may expect favorable

or unfavorable results. Some of these drugs, I believe, have no influence whatever, in which the patient might as well have had so much sawdust, and as good an effect would have been produced. The thyroid extract I have employed in some instances with very marked value. It is a well-known fact to breeders of animals that an animal which take on fat rapidly is not a good breeder. So it is in women; where there is a large amount of fat metabolic changes take place in the ovaries. Such women cease to menstruate freely and such patients are very likely to be sterile. The administration of remedies such as the thyroid, which bring about the decrease of fat, and cause changes in the condition of the ovaries, will frequently result in the occurrence of pregnancy. Of course, when we administer any remedy for sterility there is uncertainty as to its effect, for we know that sterility is due to a variety of causes. It may be due to conditions for which the woman is not at fault. When we have a patient who has taken on a large amount of adipose in a short period of time, and who has gone for a number of years without pregnancy, in whom under the influence of the drug a large amount of flesh is lost, while the menstrual flow is increased and pregnancy results, we are likely to believe, and I think justly, that the drug has some influence in bringing about the result.

I have not used mammary extract nor parotid extract, and I feel very much that the clear position which Dr. Hare took is about correct. I have seen numbers of cases of inflammation of the parotid gland follow operations, but I do not believe it has ever occurred except as the result of infection.

With regard to the influence of the ovaries upon the mammary gland, I do not believe that the operation itself has any influence upon this gland or upon cancer in the gland in women further than it arrests the hyperæmia which takes place in the mammary gland at every menstrual period, and thus the operation, in decreasing the congestion of the gland, may have an influence. It is a question whether the thyroid extract administered in the patients reported by Beatson had not as much to do with the subsidence of the diseased condition and the apparent arrest of the disease as the removal of the ovaries. The thyroid extract has a marked effect upon the epithelial and glandular tissues. This is evident from the influence it has in decreasing the amount of bleeding which takes place from the uterus when women are inclined to bleed freely, and I have learned to have a certain amount of confidence in this drug in the irregular bleedings in women near the climacteric, in which there is no other sign of

malignant degeneration. It also allays pain. I have found this in my own experience. Dr. Coover, of Harrisburg, also speaks of its influence in allaying the severe pain of carcinoma of the uterus.

Dr. GEORGE ERETY SHOEMAKER: It seems to me that observations should be largely empirical, for theory is not helping us much. I think those gentlemen who feel that these remedies have value should report a definite series of cases of failures with successes. I was speaking with a gentleman who has a very large gynæcological practice, who told me that he used mammary extract to stop hæmorrhage with a great deal of satisfaction. If there is any field for these organic extracts it is apparently in hæmorrhage.

Dr. JOHN G. CLARK: I have little to add to the discussion. I may say, however, that for three or four months I have prescribed parotid gland in a large number of cases of dysmenorrhœa and I regret to say I have thus far seen no beneficial result. I cannot but think, however, that ovarian extract may, in a certain number of cases, be of value. My own observations have not been systematic enough to be of definite value in arriving at a conclusion on this question.

In this connection the late experiments of Knauer on the transplantation of the ovary in rabbits are interesting. In nearly every instance the ovaries have grown in their new position and the follicles have continued to develop. These experiments prove that there is within the ovary a principle independent of the nervous supply which we do not yet understand, an agent physiologically different from any other in the body. If these organs are extirpated there are marked changes in the general organism, therefore there must be in the ovary some definite principle which controls these phenomena. In the use of the ovarian extract I have seen apparently good results. The French writers report the most gratifying results, but I think their observations are influenced too much by their optimistic tendencies when studying new remedies.

Dr. J. M. FISHER: If all can be credited which is reported by Dr. Krusen concerning the observation of various men, the use of these extracts should constitute an important part of the gynæcological therapeutic armamentarium. But, as Dr. Baldy has well said, there are personal elements in these cases and in the use of these remedies that must be taken into consideration, namely, the doctor and the patient. The doctor may wish to see results, and therefore endeavors to believe that he is obtaining them. I recall a case of fibroid uterus which came under my notice several years ago that was treated by a physician with the battery with a resultant decrease in size as shown by measurements,

but I found that the tumor decreased in size at certain periods only, that is, immediately after menstruation and after taking a good dose of Epsom salts. As seen in this particular case it was important to eliminate the personal element—the doctor—before coming to definite conclusions.

At the Jefferson clinic we have used thyroid extract as well as the ovarian extract. While we have not noted results as accurately as should have been done, we have become convinced of the fact that thyroid extract has an influence in reducing weight. I recall one case of amenorrhœa in whom the reduction in weight during the administration of the drug was followed by a return of the menses. In the use of the ovarian extract I cannot recall a case in which we had any result. In my private work I had a case of bilateral suppurative disease several years ago, necessitating the removal of both appendages. The patient was a woman, short in stature, phlethoric and of exceedingly nervous type. After the operation she appeared to do well for three or four months, but then began to suffer from all the symptoms of an artificially induced menopause. She was seized with frequently recurring violent abdominal and pelvic pains and an intermittent mucoid discharge from the uterus, attended with considerable suffering. She had an idiosyncrasy for morphia and I was unable to relieve her suffering. As a last resort, after consulting Dr. Krusen, I tried ovarian extract, 5 grs. three times a day. She at once appeared to improve, and while the attacks appeared as formerly they were not so severe, the intervals between the seizures were longer, and she improved in every particular. After a time I discontinued the extract and she again suffered as before. Again, after the use of the drug, she was relieved. This is the only case in which I have noted any benefit derived from the use of ovarian extract.

Dr. JOHN C. DaCOSTA: My experience has been confined chiefly to the thyroid extract. I have tried the mammary extract, but was not able to carry on the investigation long enough to obtain decided results. With the thyroid extract my results have been pretty uniform. The cases have been fibroids that refused operation. In the three cases which I reported some time ago the tumors reached about to the umbilicus and were tied down in the pelves, producing bladder and bowel symptoms. The patients absolutely refused operation and were put on thyroid extract in 5-grain doses. In each case there was marked dizziness and weakness following the use of the extract. When the extract was combined with  $\frac{1}{4}$  gr. of extract of *nux vomica* all disagreeable symptoms disappeared. After giving the thyroid



extract for a little while I noticed more freedom in the movement of the uterus and the adhesions seemed to be freer. The women became so comfortable under treatment that they absolutely refused operative treatment afterwards. I have used the treatment in several cases since; notably in one case during this year past of a woman with a fibroid as large as a small cocoanut, in which there was profuse bleeding. She told me she bled three weeks out of the four. After a week's treatment of the thyroid extract the hæmorrhage ceased. There has been since a little menstruation at regular periods, but no hæmorrhage. Rather to my surprise this uterus has diminished in size, so that now it is not larger than the closed fist. This is a result which I did not expect. I have seen other cases in which the uteri diminished in size but would increase again. In another case which I had lost sight of for a time, but have now seen within a week, the uterus, which was nearly to the umbilicus, does not now reach within two inches of it. I do not say it will not go back again. One symptom which I have noticed is a marked diminution in weight, especially marked in those who are very fat. In one case the weight was reduced from 173 to 158 lbs. in seventeen days. The extract was not continued beyond this time, but exercise and regulated diet were continued. In the other extracts, except the mammary, which I did not give sufficient trial, I have but little faith and do not use them.

Dr. WILMER KRUSEN (closing the discussion): My object in bringing the subject before the society was to secure a full discussion, which I think has been pretty thoroughly accomplished.

The one point which I would like to have been brought out is what superior advantage mammary extract would have over ergot in the treatment of hæmorrhages.

In regard to the character of the reports; some may not be of the highest order, but we have records of the very best observers in Europe which speak favorably of these remedies. From 1896 to the present time these reports have been uniformly favorable.

Dr. Shoemaker thinks we should have definite series of cases. We have a number of these, notably among which are those of Dr. Jacobs, some 150 in number.

Dr. Baldy spoke of the serum therapy, which is distinctly different from the organo-therapy.

The case of Dr. Russell is an interesting one as to the value of suprarenal extract. This extract I believe is not used much in gynæcology, although the laryngologists find it useful.

Dr. Fisher's statement that the drug was so valuable that a woman

was willing to pawn the very necessities of life is, I think, a very strong argument for its use in some cases.

*The Operative Treatment of Cancer of the Uterus.*

BY E. E. MONTGOMERY, M.D.

(See page 232.)

DISCUSSION.

Dr. JOHN G. CLARK: I have been especially impressed lately by a series of cases by Wertheim, of Vienna, in which he has carried out the radical method of operation. He has drawn his conclusions from twenty-four cases in which a careful dissection of the parametrical tissues has been made and the pelvic glands have been removed. Four or five years ago, after Dr. Russell had worked very carefully over the vaginal hysterectomy cases and had shown that the results were not as satisfactory as they apparently should be, I began working upon the possibility of a more radical method of operation, and being strongly impressed by his feelings as to the necessity for the removing of more tissue, I advocated a more radical operation for cancer of the uterus. After examining histologically the lymph glands it was found that they were apparently not involved so often as we had anticipated. In cancer of the breast the axillary glands are early involved. The work of Wertheim on this subject shows that our first view was perhaps the proper one. He has made careful examinations, and in a number of cases in which the glands were not visibly enlarged there were traces of carcinomatous metastases, showing that really the infection is frequently early, and therefore we are not safe in leaving the glands behind. In the last year or two I have reached the practical conclusion that if the glands are removed, as I prefer to do in all cases if the patient's condition admits of it, and find the glands involved, the prognosis is unfavorable. Therefore, I have stated in a number of papers that the removal of the glands is, perhaps, of more value from a prognostic than from a curative standpoint.

As to the removal of the broad ligament, we have considered induration of the broad ligament a contraindication to radical operation. Dr. Russell has reported cases in which the operation went through the cancerous area, nevertheless, the women are well to-day. These, of course, are exceptional cases, and a rule based upon these results would be most fallacious. Wertheim states, as a result of his examinations, that the board-like induration in the broad ligament

is sometimes inflammatory, rather than cancerous infiltration. From thirty years of practical experience, Freund, who was the first to perform a well planned abdominal hysterectomy, is guided by the extent of the carcinoma in his selection of methods. Vaginal hysterectomy is the operation of election, if performed simply for its palliative effect. If, on the other hand, the chances of cure are favorable, he performs the radical abdominal operation.

The removal of the pelvic glands is not an easy task, for, as in operations for cancer of the breast, it requires painstaking care and is attended with considerable danger. The removal of the glands should be the concluding step in the operation, and is dependent upon the patient's condition; if good, remove the glands: if, on the other hand, she is in a precarious condition and her life will be jeopardized by continuing the operation, cease the operation at that point.

In a general way I should, therefore, repeat the dogma laid down by Freund as the result of his thirty years' experience, in which he had carefully observed these cases and kept careful pace with literature of the whole subject; in case the cancer is inoperable from a curative standpoint: the uterus may be removed by vaginal hysterectomy to stay the hæmorrhage, to decrease the general disagreeable discharge, because it is quicker, easier and accompanied with less shock. If, on the other hand, there is a chance for cure, a radical operation is indicated.

Dr. J. M. BALDY: I would like to ask Dr. Clark the number of cases he has had with good results where the glands have been dissected out, as compared with his experience with lesser degrees of dissection, in other words, the ordinary pan-hysterectomy?

Dr. J. G. CLARK: Up to the present time I have operated upon about twenty-one cases by the radical method. Of these twenty-one cases there have been two deaths as the immediate result of the operation. Of those which survived the operation the largest number have succumbed to the disease later. I am not in a position to give definite statistics for the subsequent course of all of the cases operated upon by men while an assistant in the Johns Hopkins Hospital which have been followed by Dr. Cullen. I am in the same position as Wertheim is with his cases. He ends his description of his operation by simply saying that time must be the factor in determining whether the radical operations are to give better results.

Dr. J. M. BALDY: The whole subject of cancer is interesting and exceedingly discouraging. It seems to me that the admissions of Dr. Clark and others who have attempted the more extensive glandular

dissections have reduced the results practically to the same plane as that of the more moderate operators. As a matter of fact, most all the cases of cancer of the cervix die eventually of cancer. Dr. Kelly admits practically the same thing. I know of no one who has any other experience except the Germans. Many of the other men abroad admitted to me candidly that this was their own experience. When an occasional case lives there comes in the question of diagnosis. Be the operation vaginal hysterectomy or by the abdominal route with removal of as much of the tissue as is apparently involved, and extensive dissection of the glands (and I don't believe any man can thoroughly dissect out all the glands of the pelvis) the vast majority die, and we might as well frankly admit that and begin the study of the whole subject of cancer over again from this standpoint, and not from the standpoint of a 20 per cent. to 50 per cent. cure. We might as well candidly admit that we do not believe the statistics that come to us from Germany. They may, in a sense, be strictly or technically true, but their teaching is false, and the general result of their publication is what we are interested in.

Cancer of the fundus is an entirely different thing. Almost all operations that are done reasonably early remain well. In Dr. Kelly's statistics the vast majority have no recurrence. Pathologically they involve the same tissues. However, the one is practically a senile growth and the other a polyp. I saw Dr. Goodell remove a cancer of the fundus which had existed over four years. He removed the uterus and the patient was well years afterward. Cancer of the cervix would never have recovered. I do not believe that the man exists to-day who can clean out the glands of the pelvis thoroughly (superficial and deep). A study of the anatomy of the tissues involved would be convincing. Many of these cases may have infiltration of the glands, and many may not. It is a question at any rate as to whether these infiltrations are inflammatory or cancer. Pathology helps us little or nothing. When the pathologists disagree amongst themselves as to what is cancer in the uterus, what are we going to do when we have them considering the question of involvement of the deep glandular tissue? And the whole importance of these extensive dissections in an effort to remove the glands depends upon their dictum. Macroscopically the inflammatory condition and the cancer condition are in the majority of instances not to be differentiated. When we come down to acting upon the fine microscopical showings we find that the attempt to clear out the pelvis means such a prolonged operation that it will sacrifice 20 to 25 per cent. more of the patients than



we do by a lesser dissection. The advocates of the larger dissection cannot show any better results in their work in similar classes of cases than those who do not practice it by a lesser dissection; and we know that the patients almost all die anyway eventually; therefore, why the risks of the immediate operation?

I am glad to have heard Dr. Clark's admissions, both as to his own work, that at Johns Hopkins' and that in Germany, namely, that they have gotten no better practical results as to recurrence than where simple pan-hysterectomy has been performed. It has more fully convinced me than I was before, that these extensive dissections should, for the present, be left in the hands of the few and should not be practiced by the many.

Dr. RUSSELL: I have gone carefully over the cases which Dr. Clark has mentioned, separating them into carcinomas of the body, and carcinomas of the cervix. The ultimate results of those originating in the body were as Dr. Baldy has said, very gratifying, 60 per cent. living for two years. In carcinoma of the cervix and the vaginal portion of the cervix, dividing them into epitheliomata and adeno-carcinomata, we found that epitheliomata seemed to be more malignant than the adeno-carcinomas, 15 or 20 per cent. living two years after operation; and of the adeno-carcinomas about 20 per cent. I dislike to be placed among those whom Dr. Baldy charged as not being truthful, but that is what we found among our patients.

In reference to the operation I cannot altogether agree with what Dr. Baldy has said about the pathologists. It is true that so many of them disagree that one doesn't know where to stand, but I think that if one works persistently and studies we will come to a field where we will make headway. There are, however, very few men who are willing to spend that time. Certainly the pathological work is helping a great deal in diagnosis of carcinoma of the body of the uterus. The examination of the curetted specimens will give very positive evidence in some cases of what really exists. As to operation, we should consider always that which is the best for our patients, and we know that carcinoma if not operated upon is hopeless. If operation is done it should be done in the very best way possible, and in a way to get rid of as much of the cancerous disease as possible. No man can say in any single case how this disease is limited to any one field; whether the carcinoma is in the cervix or has gotten into the glands, so our moral duty to our patients is to get rid of every bit of tissue which we suspect can be involved. That is my position in regard to carcinoma. It seems to me that not nearly enough credit has been given to Dr.

Werder, of Pittsburg, for his method of operation for carcinoma of the uterus, a method which obviates all the dangers of implantation and lessens the risk of infection, and gives the best chance of getting rid of as much suspected area as possible. I cannot say anything better, perhaps, at this meeting than to emphasize how much that operation has impressed me, and how much credit should be given to Dr. Werder. If it does not give better results than all others, then the original operation for carcinoma of the uterus is practically hopeless, because that has accomplished all that can be done from a radical standpoint. It includes not only what the Clark-Rees operation has done, but goes further in giving us an opportunity of dissecting away large portions of the vagina and of entering the peritonæal cavity.

Dr. WEST: At the risk of being classed with the "Germans," in Dr. Baldy's opinion, I wish to report a case operated upon by the author of the paper under discussion about thirteen and a half years ago, of undoubted carcinoma of the uterus. The woman was engaged in nursing and is still carrying on that work. This is an instance showing that at least not all of these cases die, unless the pathologists are *always* at fault.

Dr. GEO. ERETY SHOEMAKER: Even if our cases do ultimately die, there is a great deal accomplished by the radical operation for carcinoma as it now is. I should be very sorry to give up the operation, judging from my own results. I have had patients live in comfort three or four years as the result of the operation, and even if recurrence should come after that interval enough has been gained to warrant the small risks of the radical operation. I have recently examined and found entirely well, after three years, two cases of vaginal hysterectomy, in which extension had occurred from the cervix to the vaginal wall. Cautery used to cut edges in both cases. Microscopical diagnosis in both. One had broad ligament extension originally.

Official Transactions.

FRANK W. TALLEY, M.D., *Secretary.*

---

## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*

DR. T. W. CLEAVELAND, DR. G. H. MALLETT, DR. A. D. CHAFFEE.

## OBSTETRICS.

## UNITED STATES.

*Some of the Accidents from the Use of the Obstetric Forceps.*

HENRY GIBBONS (*Occidental Med. Times*, January, 1901) says that with ordinary care serious injury to the mother from the use of forceps is not likely to occur. In occipito-posterior positions, where rotation has failed to take place, the perinæum may be extensively lacerated, but no more so than when forceps are not used. When serious rupture is threatened, episiotomy, or, rather, division of the larger lips, gives straight, incised wounds, which are easily sutured, and prevent jagged tears. A fold of the bladder may sometimes be bruised against the pubis by the forceps, and a slough and fistula follow, but gynæcologists assert that such an accident more often follows long delay in labor. Another possible injury is laceration of the neck of the cervix, by attempts to deliver before the full dilatation of the cervix. Bruising of the tissues covering the inner surface of the pubic arch may be caused by jamming the head and forceps against it, when the head is still in the oblique diameter, and so well up that the handles of the ordinary forceps cannot be depressed sufficiently to insure traction in the direction of the axis. In these cases axis-traction forceps must be used.

Injuries to the child from the forceps are more common and more serious. Among minor injuries are temporary facial paralysis, abrasions and bruises of the face, neck, and scalp; injury to the eyelids, hæmatomata, etc. Where the forceps are applied obliquely, and much force is used, there may be much distortion, possible fracture of bones, rupture of vessels in the brain, or laceration of the brain itself. In high operations, if the cord be about the neck of the child, it may be compressed, and circulation cut off, killing the child. The foetal heart-beat should be watched repeatedly, after applying the instruments, to

note if the force continue good. The Tarnier blade is less likely to include the cord. All of these dangers to the child are increased the higher the head is in the pelvis. While it is extremely desirable that the cervix should be completely dilated, it is not always possible to wait for this; in puerperal convulsions, hæmorrhage, exhaustion, or continued inertia, the forceps must be applied in the interests of the mother. But apart from such conditions, with the mother's strength and pulse good, and the foetal heart doing well, it is advisable to wait for the moulding of the head and the relaxation of the perinæum. When the pains are strong and the head fails to recede on the subsidence of a pain, forceps should be used to prevent undue and prolonged pressure on the maternal soft parts.

#### *Maternal Impressions.*

H. L. STAPLES (*Northwestern Lancet*, Jan. 1, 1901) reports the case of a healthy young primipara, who, when four months pregnant, visited a circus, and was much frightened by a crazy elephant, who was struggling to break his chains, and waving his trunk frantically. The woman talked about the animal for some time afterward, and feared that her infant would be "marked." When the child was born at term, after a normal and easy delivery, it was found to be singularly deformed as to its face. The body was normal. The auricles of the ears were misshapen and pendant. The nose was lacking. The mouth was very small, showing two large canine teeth in the upper maxilla. There was a central eyeball in the middle of the forehead, containing two pupils, side by side. Over this extended a process, or snout, about three inches long, perforated longitudinally, so that a probe readily passed into the head. The cranium was microcephalic. The child lived half an hour. There was no history of disease or deformity on either the father or mother's side.

#### *Prevention and Management of Infection of the Breast during Lactation.*

C. S. BACON (*N. Y. Med. Jour.*, Jan. 12, 1901) says that simple hyperæmia or congestion of the breasts must be distinguished from infection. There should be no fever attending the establishment of the milk secretion, and a rise of temperature on the third day points to genital wound infection, while fever and chills, a little later in the puerperium, may indicate either genital or breast infection. The predominant local symptoms will usually determine that question.



The use of astringents, fatty substances, or any suction apparatus for developing the nipple is not to be advised. The careful washing of the nipple, with soap and water, during pregnancy, is all that is necessary. All measures tending to improve the general health, both before and after confinement, tend to prevent breast infection by increasing the resistance of the tissues to the invasion of germs. After confinement, the contamination of the nipples is to be avoided, and any nipple wounds healed as quickly as possible. The child is a possible source of infection if it has sore eyes or any pustular eruptions on face, neck, or head. Each pustule must be carefully opened and protected with a little cotton and collodion. The child's face should be washed before each nursing, and where there is much trouble with the eyes a nipple-shield should be used. Suppuration in the glands of Montgomery is not a common, but it is an important, source of danger. The gland must be opened and sealed with collodion during nursing. Handling with contaminated fingers is to be guarded against. Washing the nipple with clean water before nursing, and with 75 per cent. alcohol after nursing, and keeping sterilized gauze always over the nipple, is usually sufficient protection. A properly fitted nipple-shield will not only prevent, but allow of, the cure of abraded nipples. This shield must be thoroughly washed, dried, and placed in a piece of clean gauze after each nursing. A slight infection of the nipple will usually heal with the application of cotton saturated with alcohol. Deeper infection must be treated by stopping nursing, and supporting the breast with a bandage. A simple strip of cotton cloth passed around the body and fastened with safety-pins in front, usually suffices. The breasts are to be raised and supported by this, not compressed. A double Y-bandage is better, for with this the nipple of the breast, on the unaffected side, may be left uncovered for nursing. Where both breasts are affected, and nursing must be stopped, a roller bandage, three inches wide and twelve to twenty yards long, may be used, as recommended by the late P. A. Harris. The breasts and shoulder are protected by a layer of absorbent cotton. Begin with two turns around the body, one turn under the first breast and over the opposite shoulder, then under the second breast, over the back, across the opposite shoulder, down in front, and under the breast again. Then around the body, under first breast, across front of chest, over shoulder, under both breasts, and across back: then over the shoulder opposite second breast, and under that breast. This turn may be repeated. Then under first breast, above second, across back, above first and under

second breast, forming a figure of eight around breasts. Repeat this, then finish with two turns around the chest, over both breasts. Numerous safety-pins hold this bandage in position. Great care is needed to prevent the bandage being too tight.

Ice-bags used in connection with the Y-bandage are of great value. Where tenderness persists, with increase in temperature and a suspicion of fluctuation, the question of the existence of pus must be settled by an aspirating needle. Infiltration anæsthesia is of value, for the abscess may be opened early, and without pain. After disinfecting the skin, a few drops of Schleich's solution No. 2 is applied, with an aseptic hypodermic needle. After incision, the pus is washed out with sterilized water, a few iodoform threads introduced for drainage, an antiseptic dressing applied, and the breast bandaged very firmly. Drainage is removed in twenty-four hours. The wound is kept open by irrigation for two days, then allowed to heal.

*Pregnancy following Removal of Both Ovaries and Tubes.*

M. A. MORRIS (*Boston Med. and Surg. Jour.*, Jan. 24, 1901) reports the case of a woman who came under his care for dysmenorrhœa. She had never been well since the birth of her only child, four years before, but suffered most during the menstrual period, which lasted seven days. Examination showed slight laceration of the cervix, with a small amount of discharge present. The uterus was anteverted, immovable laterally, and somewhat tender. Both tubes were thickened and tender. The right ovary was enlarged, the left was not felt. Hot vaginal douches were ordered, and a month later the uterus was dilated and curetted, affording some relief for two months. Later on, the symptoms returning, laparotomy was decided upon and performed. Numerous adhesions existed between the organs in the pelvis. The appendix was adherent by its tip, and was released. The right ovary was cystic, and the left contained a hæmatoma the size of an egg. The ovaries and tubes were ligated with silk, close to the uterus, and removed. Recovery was rapid. Menstruation began two weeks after the operation, and was regular and painless for four months. Ten months later she consulted the writer for nausea, cardialgia, and abdominal enlargement. She was evidently about five months pregnant, and was delivered at term of a healthy child. Since then her menstruation has been regular, normal, and painless. The only explanation of the case must be that given in other similar cases: either there was a third ovary, or a scrap of ovarian tissue

was left behind. As to the passage of the ovum into the uterus, a ligature may have dropped off, or there may have been another ostium between the ligature and the uterus. In a case operated upon by the writer seven years ago, the Fallopian tube had two ostia, each surrounded by fimbriæ.

- I. *Septicæmia—Acute Bacteriæmia; Pyæmia—Chronic Bacteriæmia.*
- II. *The Indications for Hysterectomy and the Indications for Abdominal Section and Drainage in Puerperal Infection.*

H. J. BOLDT (*N. Y. Med. Jour.*, Jan. 26, 1901) says that although there are a number of varieties of streptococci, they have approximately the same morphological characters, and their different effects are due to different degrees of toxic virulence. A number of definitions are quoted from different writers as to the differences between septicæmia and pyæmia, but the writer considers that the difference lies in the manner in which the pathogenic germs are introduced into the system, and in the duration of the disease. In septicæmia, the germs are thrown directly into the blood circulation, and there multiply rapidly, while in pyæmia the micro-organisms are largely disseminated through the medium of the slower lymph circulation, and come from an infected thrombus, the resulting abscesses being due to the parasitic organisms finding a resting-place outside of the blood circulation. Septicæmia begins with intense symptoms, which continue severe until death; pyæmia has exacerbations and remissions. Bacteriological examinations of the blood or tissues in the two forms of infection show no difference, and the terms "acute" and "chronic bacteriæmia" convey the most correct idea as to the origin and progress of the two conditions.

With this definition of septicæmia, it should be evident that extirpation of the uterus or abdominal section, with drainage, either with or without extirpation of annexæ, must be futile. Many writers, in reporting clinical cases, include under puerperal septicæmia (acute bacteriæmia), cases of local septic infection, accompanied by serious constitutional symptoms, and, hence, report recoveries after laparotomies. Such a result never has been, and never will be, achieved by the above surgical procedures, in cases of true, acute bacteriæmia. If these cases can be cured, it must be by a serum treatment. The only effect of operation is to hasten death.

But these radical operations are indicated in certain cases of

septic infection, and the recognition and differentiation of these cases is most important. For general guidance, the following indications for hysterectomy are suggested when it is evident that less heroic treatment is useless:

1. If, after a full-term delivery or an abortion, there are no conception products in the uterus, and the patient has fever, with exacerbations, chills, small, rapid pulse, and careful observation shows that the infection comes from the uterus alone, that organ being enlarged and relaxed, if streptococci are found in the uterus, and especially if the blood contains pathogenic germs, and there be no peritonitis present, hysterectomy is indicated.

2. Where there are decomposition products in the uterus, which cannot be removed satisfactorily *per vaginam*; or if, on doing a Cæsarian section, the uterus is found septic, abdominal hysterectomy is indicated.

3. In diffuse septic peritonitis, where there is no evidence of an exudate in the pelvis, abdominal section, with drainage, is called for. The annexa may be left undisturbed unless there is positive indication to do otherwise.

*Cæsarian Section Three Times in Same Person in Six and a Half Years.*

J. W. COAKLEY (*Medical Brief*, February, 1901) was called in August, 1893, to see a woman in labor in her fourth pregnancy. The first pregnancy had terminated in an early abortion; in the second and third, craniotomy had been performed. This time Cæsarian section was advised and performed, resulting in the delivery of a healthy child. The mother's recovery was rapid and uneventful. Two years later the same operation was repeated, with equally good results for mother and child. The incision was made through the cicatrix of the previous incision. The third equally successful section was performed in March, 1900. The uterus was, in each case, lifted well out of the abdominal incision before being opened. After washing out the uterus with a disinfectant fluid, through the vagina, the uterine cavity was sponged nearly dry, then powdered with iodoform before introducing the sutures. In the third operation only half an ounce of chloroform was used in anæsthetizing the patient, and the operation was completed, except tying the sutures, in thirteen minutes from the time of beginning. Morphia, belladonna, and nux vomica were given each time before the administration of the chloroform.



*A Case of Puerperal Sepsis from Retained Lochia (Lochiametra), with Remarks.*

GEORGE P. SHEARS (*Medical News*, Feb. 2, 1901) reports the case of a primipara, whose labor and puerperium were marked by no unusual symptoms, except by a marked scantiness of the lochial discharge, until the sixth day, when the temperature rose suddenly to 103° and the pulse to 120. An intra-uterine douche produced but little improvement in the condition. Examination on the following evening, by the writer, showed a boggy, semi-elastic feeling uterus, strongly anteflexed. Suprapubic pressure and traction upon the anterior cervical lip restored the uterus to its normal position, and rendered digital examination of the interior possible. There were no remains of placenta or membrane, simply an accumulation of lochia. The uterine cavity was irrigated, and the corrected position allowing of free drainage, the temperature became normal, and recovery was uninterrupted. While this condition is not uncommon, it is completely ignored in many English and American text-books, and is worthy of attention as an ætiological factor in some cases of puerperal sepsis. It may occur in cases of retroflexion, as well as in anteflexion of the uterus, and adds another instance where curettage in puerperal sepsis is not only unnecessary, but dangerous. Although intra-uterine irrigation was used as an additional precaution in this case, it is probable that reposition of the uterus, with an ice-bag over the fundus, would have been sufficient.

The description of the physical signs of puerperal septic endometritis, an enlarged, sensitive, boggy uterus, is, as a rule, incorrect and misleading. These signs point rather to a diffuse metritis, or, as in this case, to retained lochia. Careful bacteriological examination as to the nature of the infection, while desirable from a scientific standpoint, is not always to the interest of the patient.

The symptoms of lochiametra usually develop toward the end of the first week, as do uterine and para-uterine phlebitis. In both cases the uterine interior is smooth, and disastrous results are liable to follow curettage, while in phlebitis even intra-uterine douching is dangerous.

As to the ætiology of lochiametra, flexion of the uterus is merely a predisposing cause, as neither retained lochia, nor any other organic substance, undergoes spontaneous decomposition. The infection may be transmitted in the usual way, *i.e.*, by the examining finger, instruments, etc., but since all air contains saphrophytes, it seems reasonable to suppose that decomposition may result from the admission of air

to the vagina and uterus, especially during the manipulations of the third stage of labor.

CANADA.

*Vesical Hæmorrhage during Labor.*

GEORGE A. BROWN (*Montreal Med. Jour.*, January, 1901) reports the case of a multipara who had given birth to eleven children, each labor having some complication, usually post-partum hæmorrhage. When nearly at term, in her twelfth pregnancy, she had a fall, followed by pain in her left hip, and on the second day, by pain in the bladder, with desire to urinate, but with inability to do so. The bearing-down sensation gradually developed into regular labor pains. She was catheterized, and half a pint of bloody urine was drawn. Later in the day the membranes ruptured, and the pain in the bladder was intense. Catheterization drew off more bloody urine. The presentation was a breech, and the pressure during the pain forced down the anterior vaginal wall, causing excruciating pain in the bladder. The external os could hardly be found and was but slightly dilated. The patient was placed in the knee and chest position, and during each pain the anterior vaginal wall was held away from the breech, allowing the pressure to come on the os, which gradually dilated, and the child was extracted. Catheterization was necessary for two days, during which time the urine was bloody and ammoniacal, and the withdrawal of the catheter was followed, in one instance, by the passage of small blood clots. One-half grain of urotropine was given three times daily, and the condition gradually improved, until in three days she was passing normal urine. There were no other complications, and recovery was speedy.

GREAT BRITAIN.

*Primary Ovarian Pregnancy, with Rupture Fourteen Days after Last Menstruation.*

G. P. ANNING and HARRY LITTLEWOOD (*The Lancet*, Jan. 12, 1901) say that while belief in ovarian pregnancy can be traced back for two centuries, it is only within the past few years that cases have been reported proving beyond a question the possibility of its occurrence. The case reported was a young woman, married five months. Menstruation regular and normal. Had never been pregnant. Symptoms attributed to a ruptured ectopic gestation, led to a laparotomy two

weeks following a menstrual period. About two pints of blood and clots were removed, and a small ovum, fitted into a firm envelope composed of laminated clots, was found. A rent in the right ovary led to a cavity containing some blood, and into this cavity the ovum and its sac exactly fitted, clearly indicating the primary ovarian origin of the pregnancy. The right tube was removed and showed no signs of rupture. The left tube was carefully examined, and was normal.

*A Note on the Treatment of Puerperal Eclampsia.*

R. P. RANKEN LYLE (*British Med. Jour.*, Jan. 19, 1901) says that while diuretic infusions are a valuable adjunct to the usual treatment for eclampsia, they are of no immediate value in controlling convulsions, nor do they affect the action of the uterine muscle. The three principles involved in the treatment of this condition are: (1) The purifying of the blood, (2) control of the convulsions, and (3) emptying of the uterus. The diuretic infusions are valuable in the first of these indications, while for the second the writer has found nothing to equal morphine. This remedy controls the convulsions by allaying the irritability of the cerebrospinal system, prevents excess of waste products being thrown into the blood, does not weaken the patient nor injure the child, does not affect the kidneys, and, under its influence, labor often begins and quickly terminates, without further convulsions. In eight consecutive cases of eclampsia treated by morphine only one died, and here the liver was very large, and extensively diseased. As soon as the patient enters the second stage of labor delivery should be terminated by forceps, but induction of labor, dilatation of the cervix, version, or *accouchement forcé* are not advisable procedures. If labor does not supervene under morphine, the convulsions are usually controlled, and the patient, if carefully treated, will probably go on to full term, without recurrence of the convulsions.

---

## PÆDIATRICS.

## UNITED STATES.

*Cæsarian Section Three Times in Same Person in Six-and-a-Half Infants and Children.*

H. ILLOWAY (*Pædiatrics*, Dec. 15, 1900) is positive, in spite of the almost universal opinion to the contrary, that the pneumonic process in infants and children can be arrested at its onset by means within the reach of every physician. He divides the cases into two groups, according to the medication used. Under group A, four cases are reported. The first was an infant of nine months, with a temperature of  $104^{\circ}$ , and marked broncho-pneumonia. Child in a stupor, aroused only by coughing; would nurse but a few seconds at a time. Three-fourths of a drop of the tincture of veratrum viride, and  $\frac{1}{4}$  of a drop of the tincture of aconite, was ordered to be given every hour and a half, in a teaspoonful of water. The temperature had fallen to  $100^{\circ}$  in eight hours after the first dose, and the child had nursed twice. The following day the temperature was normal, and the child was eating and sleeping well. The medicine was discontinued, and a mild expectorant ordered. There was no further rise of temperature, the cough grew less frequent, and in ten days ceased. Case second was a child of eleven years, who had previously had two attacks of pneumonia (the last three years before), which had been treated by quinine, carbonate of ammonia, stimulants, etc. When seen in the last attack there was extensive involvement of the left lung, a temperature of  $105^{\circ}$ , frequent painful cough. The same treatment as in case first was ordered, but the interval between doses was shortened to one hour. Seven hours later the temperature was  $100.5^{\circ}$ , and the child was up and feeling well. The interval between doses was increased to every three hours. The next morning the temperature was normal, cough loose and painless. A mild expectorant was substituted as before, and the child kept in the house for a week, although she felt perfectly well. From the previous attacks of pneumonia the convalescence had been long and tedious. Case third was an infant, and the fourth a child of eleven. There was the same treatment, with prompt relief. Only in the last case does the



writer speak as to the persistence of the physical signs. In this case "the dulness had disappeared at the end of a week: only some moist râles remained."

Under group B, two cases are cited, one a child of four, the other of two years, both with broncho-pneumonia. In both cases the heart's action was very rapid and "tumultuous," and the following mixture was ordered:

**R** Infus. digital..... (grs. x ad  $\bar{5}i$ )  $\bar{5}ivss$   
 Ammon. carbon..... grs. v  
 Syr. toltan.....  $\bar{5}ii$   
 Aq. destill.....  $\bar{5}iss$   
**M. Sig.** One teaspoonful every two hours.

The effect in both cases was marked and immediate, and there was no return of the fever or rapid heart action. That the remedies used in these two classes of cases did not merely reduce the temperature and leave the pathological process going on would seem to be shown by the fact that there was no further rise, and the general condition steadily improved.

### *Treatment of Influenza in Children.*

A. JACOBI (*Medical News*, Dec. 15, 1900) says that there is no infectious disease equal in communicability to influenza, nor is there any disease that causes a greater predisposition to tuberculosis. Certain measures in the way of prophylaxis sometimes avail. Where it is possible, any member of the household attacked with influenza should be isolated on the upper floor of the house; toys, towels, handkerchiefs, and linen should be disinfected and washed as in other contagious diseases. Sick and well children should use as a disinfectant mouth-wash water slightly acidulated with hydrochloric acid. It is well also to acidulate all the drinking-water in the same way. The mucous membrane of the nose must be kept clean and healthy by irrigation. Drugs, as preventatives, are of little value.

The treatment must be rational, hygienic, symptomatic, and sustaining. There is no specific for influenza. A purgative dose of calomel should be given at the beginning of an attack. Rest in bed, in a warm room, with somewhat scanty and fluid diet at first, is advised. Alcohol is rarely needed until the slow convalescence. In this respect influenza differs from typhoid and diphtheria. Cold water, either as a bath or a pack, should not be used in influenza, neither should very hot water, except for a short bath in an occasional collapse. Warm

baths, however, are beneficial, relieving pain and restlessness. Where there is much vomiting, temporary abstinence at first and later on rectal alimentation, is indicated. Alcohol, greatly diluted, peptones, mild salt solution, and liquid albumins, are readily absorbed in the colon, and peptonized milk, eggs, and broth, are absorbed in part. The hips must be elevated, and the irrigator raised not more than a foot above the anus. The best drug for the relief of the vomiting is morphine. One-half to 1 drop of Magendie's solution may be placed, without dilution, on the tongue of a child from two to four years of age, or a tablet of 1 milligram may be used in the same way. When the general condition is good, and no danger is incurred from the fever, it should be let alone. The younger the patient the greater the danger from fever. A high temperature, without any or only a trifling remission, should not be allowed to last. In 1890, the writer advised the use of acetanilid among the poor on account of its low price. He now declares that it should not be used under any circumstances, as it has a paralyzing effect on the central nervous system, it destroys the blood and causes anæmia, and often causes severe cyanosis, especially in the young. While the general effects of antipyrin are good, its undesirable effects are many. Phenacetin is the best of these preparations, and may be given to infants and children in doses ranging from 15 milligrams to 3 centigrams (gr.  $\frac{1}{4}$ - $\frac{1}{2}$ ). It is not only an antipyretic, but a sedative and an analgesic. Salipyrin is recommended by Finkler, and Drews has found salophen of value, especially in the nervous form of influenza. Where there is languor and feeble heart action, none of those drugs should be given without the addition of a stimulant. The salicylate or benzoate of sodio-cafein is the very best; this may be given in doses of from 3 to 10 grains daily. Where it seems to excite the brain it may be replaced by daily doses of from 1 to 4 decigrams of camphor. In an emergency, these doses must be much increased or given in subcutaneous injections, caffein being soluble in two parts of water, and camphor in four parts of sweet almond oil. In very urgent cases, there is nothing better as a stimulant than the 10-per-cent. tincture of Siberian musk. A child of two years may receive from 5 to 10 minims every half hour, until eight or ten doses have been given. Hot enemas should also be used.

*Ear Diseases in Infancy and Childhood.*

J. HOMER COULTER (*Jour. Amer. Med. As.*, Dec. 15, 1900) says that the most common ear affections in infants and young children

are acute middle-ear suppuration, impacted cerumen, foreign bodies, furunculosis, granulations, eczema, necrosis, polypi, extradural or cerebral abscess, and traumatisms; of these, the first mentioned is by far the most frequent and important, although the gravity of a discharge from the ear of a child is too often underestimated. Heredity must not be overlooked in the ætiology of this trouble, for while syphilis and tuberculosis are seldom seen as primary ear infections in children, as hereditary factors they may be important. In statistics collected from almost 1,000 cases of middle-ear disease in children, 70 per cent. gave a history of nasopharyngeal disease. Frankenburg, in an examination of 158 deaf-mutes, found a marked adenoid condition in over a third of the number. Other recognized ætiological factors are the exanthemata, typhoid, diphtheria, exposure, traumatisms, and foreign bodies.

The prognosis should never be hasty or unwarranted, and will depend upon the following conditions: (1) The age and health of the child. (2) The severity of any concomitant disease giving rise to the purulent condition. (3) Pending or threatened brain or sinus involvement or bone necrosis. Earache of a recurrent character usually indicates lymphoid involvement. The severity of the pain is not necessarily an index to the gravity of the case, and even slight pain should always receive the careful attention of a physician. Opium should rarely be given, as it will often mask the approach of a serious condition. The application of heat or cold will usually afford temporary relief. In the use of a douche very little pressure in the stream must be used, lest the infection be extended. Leeches are appropriate in some cases to relieve congestion, especially where the services of a reliable aurist cannot be obtained. Politzerization and poultices are not advisable. The nasopharyngeal or pharyngeal factors present must be thoroughly examined and treated. Ordinarily, if the pain is not much relieved within twenty-four hours, by the application of heat or cold, there will be present sufficient indications to warrant a paracentesis. The relief afforded by this operation should demonstrate its value to the most conservative practitioner, yet too often the cases are left until the pus bursts through and largely destroys the tympanic membrane, or invades the mastoid cavity. Bulging, or even great tension of the membrane, insufficient drainage through an already ruptured membrane, or excessive and continuous pain, are all imperative indications for paracentesis.

The cut should be made from the lower edge of the posterior-inferior segment of the tympanum, and extended some distance up-

ward and outward into the cartilaginous canal, where frequently there is some bulging of the tissues. The operation is not dangerous nor as difficult as many suppose. If possible, the case should have skilled nursing, for the necessary thoroughness in the care of the ear cannot, as a rule, be obtained from the child's mother. The diet must be limited and mild, the bowels and eliminative functions kept freely acting, and physical and mental rest must be strictly enjoined.

*Remarks on the Pathogenesis and Prophylaxis of Acute Rheumatic Fever in Children.*

HENRY HEIMAN (*Archives of Pædiatrics*, January, 1901) says that the germ theory of the ætiology of this disease is most reasonable, being founded on the following facts: (1) Pathologic evidences based on the findings at autopsies. (2) Examinations of the blood during the acute stage give similar results to those obtained in some infectious diseases. (3) Specific organisms have been found in the secretions, isolated and injected into the blood of animals, causing joint inflammation, with secretion containing the same micro-organism. (4) The clinical picture presents a constitutional disease, with local manifestations.

The portals of infection are usually the tonsils, the digestive or the respiratory tract; from thence the germs or toxins find a way to the serous cavities, and by predilection to the joints, where an inflammatory process results. The microbes are evidently of highly attenuated virulence, as the secretion does not become purulent. The means of transposition to other textures, organs, or the skin are not known.

In children there is less tendency to severe joint involvements, but more to metastasis of the bacteria, and consequent involvement of other parts. Endocarditis is the most frequent complication in childhood, but pericarditis, chorea, purpura, erythema nodosum, or torticollis may occur. Peptonuria is a frequent condition. The pleura is seldom involved in children under four years of age.

The disease is rare in children under three years of age. Most cases of joint disease occurring in the first year are scurvy. The treatment must be directed toward: (1) Combatting the poison of the disease; (2) alleviating the symptoms, and (3) preventing involvement and recurrence, for one attack does not immunize, but predisposes to subsequent attacks.

The salicylates best counteract the poison. Rest, immobilization, local applications of heat or cold, and the use of drugs, as indicated



by various symptoms, are important. The writer believes that, as quinine is used to prevent relapses in malarial fever, so the salicylates may be used in rheumatic fever. After the acute local and constitutional symptoms have subsided, and the patient is apparently well, the administration of the salicylates is continued in 3 to 5 grain doses three times daily for one week each month, for a year or a little longer.

*A Study of the Plantar Reflex in Infancy.*

JOHN LOVETT MORSE (*Pædiatrics*, Jan. 1, 1901) made a careful examination of 254 consecutive infants under two years of age, not suffering from any nervous disease, to determine the presence or absence of the plantar reflex in infants; if present, its character; if absent, at what age it developed; and the value of the Babinski phenomenon in the diagnosis of nervous diseases in infancy. The conclusions of various writers on this subject are somewhat at variance.

A moderately sharply pointed stick was drawn, with medium force and rapidity, from the heel toward the toes along the outer side and middle of the foot. Each child was tested several times. The extension of all or some of the toes was accepted as the flexor reflex. The extensor reflex was limited to the deliberate marked extension of the great toe, with or without separation or extension of the other toes. Dorsal flexion of the foot, as a whole, was excluded. The following conclusion was drawn from the carefully prepared statistics: (1) There is no constant plantar reflex during the first year, and while the reflex approaches the adult reflex during the second year, it is inconstant. (2) Owing to this fact, no conclusions can be drawn from the presence, absence, or character of the reflex in the diagnosis of nervous diseases in infants. (3) While not at present able to state when the plantar reflex becomes of the normal adult type, it is evidently later than the second year.

*The Douche in the Treatment of Ophthalmia Neonatorum.*

E. E. HOLT (*Jour. Amer. Med. As.*, Jan. 5, 1901) reports the case of an infant, between two and three weeks old, who was sent to him for treatment. There was a profuse purulent discharge from both eyes, and the lids were so swollen that it was difficult to make an examination of the cornea. But it was decided that the cornea was involved and about to break down in each eye. There seemed little prospect that the ordinary methods of treatment would avail, and it

was thought possible that if the secretions from the conjunctiva could be constantly washed away there might be some hope of saving the sight. With a Davidson syringe the No. 1 point was pressed between the lids at the outer canthus, and a stream of tepid water, containing 1 per cent. of boric acid, was thrown in, until a quart or more had been used in each eye. The point of the syringe was always directed away from the eyeball, and gradually worked along the whole length of the retrotarsal fold, so that the conjunctival sac was thoroughly washed out. This process was repeated every half hour, night and day, for twenty-four hours, then every hour during the next day, and so on, at lengthened intervals, until, on the fifth day, the baby opened its eyes and looked around the room. The cornea cleared, and recovery was complete and rapid. Other cases have since attested to the value of this method in critical conditions. In the case mentioned, a 2-per-cent. solution of nitrate of silver had been used from the first, and the eyes cleansed by irrigations, pipettes, and absorbent cotton. This silver solution was applied once daily, and cold cloths applied to the lids between the douchings.

*The Purulent Rhinitis of Children as a Source of Infection in Cervical Adenitis.*

CAROLUS M. COBB (*Boston Med. and Surg. Jour.*, Jan. 10, 1901) says that cervical adenitis is as truly the result of infection as adenitis in any other part of the body, but the plan of treatment pursued is often in direct opposition to the principles of surgery, since the source of infection is not investigated. Comparatively few cases of cervical adenitis are tuberculous in origin, and in these cases there will be found either a general systemic infection, or diseased tissues at the point of local infection, as is the case in tubercular tonsils. But purulent or mucopurulent diseases of the nasal cavities, as a source of infection, has been too often overlooked. A chronic nasal discharge always has its source in the nasal accessory sinuses, except in cases of foreign bodies, dead bone, tubercular or syphilitic disease. The sinuses may become infected during the progress of diphtheria, the exanthemata, typhoid, etc., and the infection having once taken place and the discharge established absorption will sooner or later occur, and the lymphatics of the nose being directly connected with those of the neck, a cervical adenitis may readily follow, and as long as the rhinitis remains unhealed, the involvement of cervical glands is apt to progress. The affected glands may be removed, but this will not

prevent the involvement of others. While a purulent discharge from the nose may persist for a long time without causing cervical adenitis, since the retained secretion is largely contained in bony cavities, it eventually denudes the mucous membrane over which it flows, and the acute congestion of a fresh "cold" blocks the flow, and absorption of the secretion takes place, with resulting glandular infection. Adenoids and enlarged tonsils are now universally recognized as sources of danger and are promptly removed; it would be well to add nasal discharges to the list of local affections demanding prompt and energetic treatment.

*The Education of the Sense of Touch in Feeble-Minded Children and Its Connection with Manual and Industrial Training.*

FLETCHER BEACH (*Jour. Amer. Med. As.*, Jan. 12, 1901) says that Herbert Spencer has shown that touch is a universal language, into which the other senses, as special languages, have to be translated. But, in order that the sense of touch should be well developed, the nervous structures of the skin must be normal. Sensation in feeble-minded children is duller than the normal. They are often quite indifferent to heat or cold, and are not as sensitive to pain. There is, moreover, great want of co-ordinating power in the muscles. The first lessons should cultivate sensation, teaching the difference between hard and soft, rough and smooth, heat and cold, by causing the child to handle over and over again different objects illustrating these qualities. The next point should be to substitute purposive movements in place of the purposeless, automatic or choreiform movements. For children suffering from athetosis, the placing of marbles in the cavities on a solitaire board is a good beginning in the way of training, calling for co-ordinate movements of both the hand and eye. The ability to dress himself indicates more progress in a weak-minded child than improvement in speech. Since the introduction of manual training into the Darenth Schools for Imbeciles, of which the writer was superintendent, the improvement has been much more rapid.

---

## GYNÆCOLOGY.

## UNITED STATES.

*A Removable Buried Suture for Abdominal Incision.*

EVAN O'NEILL KANE (*The Penn. Med. Jour.*, Dec., 1900) says that no covered suture has been found which may not, at some time, cause trouble. The suture devised by the writer acts as a buried stitch and yet can be completely withdrawn. An inch from each extremity of the wound to be united a small piece of skin is snipped out. A half-curved needle, armed with silk thread carrying a strong silver wire is introduced through one of these openings in the skin, penetrates the layers of the abdominal wall at an angle of  $45^{\circ}$ , and emerges beneath the peritoneum just short of the termination of the incision. The needle and silk thread are drawn through, and a wide, over-hand stitch whipped along the entire length of the severed peritoneum, the needle emerging through the other skin opening. The silver wire is then drawn through. By a repetition of this process the several layers are separately traversed, even to the under surfaces of the skin. The wire is drawn taut, approximating the various portions of the wound, and the ends of the wires are threaded upon two broad, flat buttons and twisted, or each wire may be retained separately by a split shot over the button. To remove the sutures the wires are cut beneath one button, and firm traction is made on the other. The especial point is the removal of the small piece of skin, entirely avoiding the occurrence of skin infection. This suture not only approximates the several layers accurately laterally, but also presses the surfaces from below upwards, preventing the formation of blood clots between the layers, and by raising the peritoneum from the viscera, as no other suture does, lessens the tendency to parietal adhesions along the line of incision.

*Position in the After-Treatment of Abdominal Operation.*

D. W. SPRINGER (*Medical Sentinel*, January, 1901) says that the position generally advised by surgeons is the recumbent, and the elevation of the foot of the bed is recommended in many instances. After



reading an article by Geo. R. Fowler, of New York on "Septic Peritonitis" the writer determined to act on the suggestions contained therein and reports six cases in which, after abdominal section, the head of the bed was raised from twelve to fifteen inches, and maintained at that elevation. All of the cases made uncomplicated recoveries, although two were cases of septic peritonitis. The advantages claimed for this position are: (1) It lessens the nausea and vomiting; (2) it aids the natural peristalsis, gas, in ordinary cases, being passed voluntarily inside of twenty-four hours; (3) it lessens the danger of rapid absorption in septic cases, by favoring drainage into the pelvis, where the lymphatics are small and absorption slow, and where drainage is easily maintained.

*Anteflexion. Its Importance and Its Operative Treatment.*

RUFUS A. KINGMAN (*Annals of Gyn. and Pediatry*, Jan., 1901) says that the causes of anteflexion may be classified as congenital and acquired; the former comprising poor constitutions, imperfectly developed bodies and tendency to disease. These causes may act alone but more often unite with insufficient or improper food, hard work, excessive study or tight clothing to produce anteflexion. The various diseases experienced prior to or during puberty may inhibit the normal development of the uterus and so perpetuate the normal flexion of infancy and childhood. Constipation and any infection of the genital tract capable of setting up an endometritis may produce anteflexion. Failure of the vagina to sufficiently elongate results in either retroversion or anteflexion, more frequently the latter. Often some inflammatory process behind the uterus produces contraction of the utero-sacral ligaments, resulting in an intractable anteflexion. These posterior ligaments being contracted, the uterus is drawn closely to the posterior pelvic wall, the pelvic floor and rectal contents hold the cervix forward, while the fundus is forced in the same direction by abdominal pressure.

Dysmenorrhœa, backache, sterility, an irritable bladder and pain in the rectum are symptoms. The writer also considers anteflexion the chief cause of the vomiting of pregnancy. Diagnosis is not always easy, and the following suggestions may be of service. Pressure in front of the cervix will detect a solid body between the finger and the promontory. Pressure behind the cervix shows the sacrum close behind the cervix, while lifting the cervix elicits pain and renders the limitation of forward and upward motion apparent. It is important

to note the degree of contraction of the utero-sacral ligaments, the length and character of the cervix, and the sharpness of the angle of flexion, in order to give correct treatment and an accurate prognosis. If there is a neurotic condition of the patient, it must be eliminated as far as possible by the improvement of the patient's general health and tone, for otherwise there will be a continuance of complaint in spite of all measures for the relief or cure of the antelexion.

Much may be done in the way of prophylaxis, with young girls, by proper dress, recreation, food, sleep and physical training, but where the deformity already exists the treatment must be adapted to the individual case. In the simpler forms, gradual dilatation of the cervix, combined with medicated douches and tampons, or forcible dilatation under ether and curetting, may afford relief. Sterility and dysmenorrhœa in these cases are due rather to general disturbances in the pelvic circulation and endometritis than to mechanical obstruction in the cervix, hence the cervical plug and gauze drain are not indicated.

Where the cervix is very long or greatly hypertrophied, or the vagina extremely short, amputation of the cervix may be performed, but the cases demanding it are few. The Dudley operation is particularly useful in cases of long duration, presenting a sharp, angular flexion. In cases where the utero-sacral ligaments are contracted more radical measures are needed. The posterior ligaments must be cut, either by the vaginal or abdominal route. With the vaginal incision there may be some difficulty in controlling the hæmorrhage, although it will usually yield to one or two sutures. The best technic for the abdominal method is as follows: With the patient in the Trendelenberg position, the abdomen is opened and the bowels are pressed out of the way with gauze, and held back with a broad retractor, carried to the bottom of Douglas's pouch. The point of insertion of the ligaments on the posterior uterine wall is seized with a pair of bullet-forceps and the ligament put on the stretch by traction, raised with a blunt hook and divided near its uterine attachment. To prevent hæmorrhage and avoid denuded tissue in the pelvis, the edges of the peritoneum are brought together with catgut sutures. The uterus is lightly suspended, by two chromicized catgut sutures, through or just anterior to the fundus. This keeps the divided ligaments apart until they have healed, and prevents a relapse. Dysmenorrhœa and back-ache are usually relieved, bladder irritability other than actual cystitis yields at once, progressive endometritis and parametritis are cut short in most cases, and sterility is overcome in a fair percentage of cases.

*Ventral Hernia following Abdominal Section.*

B. BRINDLEY EADS (*Annals of Surgery*, Jan., 1901) says that ventral hernia follows laparotomy in fully 15 per cent. of cases. Not only must the physiology of the abdominal wall be taken into consideration, but the anatomy as well. After taking up the different layers of the abdominal wall in detail, the writer emphasizes the importance of an intimate acquaintance with the nerve supply, which, for surgical purposes, may be divided into three groups, according to their course and the areas of the abdominal parietes supplied by them. The seventh and eighth intercostal pursue an obliquely ascending, transverse course, supplying the upper third of the abdominal wall. The ninth and tenth pass transversely inward to the middle third, while the eleventh and twelfth, together with the iliohypogastric and ilio-inguinal nerves, descend in an obliquely transverse direction to supply the lower third. If the nerve be severed, the portion of the muscle distal to the seat of division loses its contractile power, its blood supply is diminished, it weakens, and, in response to the demands of intra-abdominal pressure, the overlying structures stretch, and hernia results. Neither close suturing, accurate apposition, the recumbent position nor mechanical appliances can prevent this. Intact, innervated muscular fibre is the only safeguard, and the first rule for the incision is to make it parallel, or nearly so, with the direction of the motor nerves and the most important muscular fibers. The length of the incision depends on the thickness of the superficial fascia, and must allow free access to the muscles whose functional integrity is essential to success. The incision must be relatively longer when muscular fibers are to be separated instead of divided, and, of course, varies with the pathological condition. The opening must permit thorough exploration, and provide every facility for precision and rapidity in manipulation, and ample space for the protection of surrounding viscera. A long incision through the skin and superficial fascia does not predispose to hernia, and diminishes the danger of shock by lessening the time of operation. On a carefully drawn diagram a number of incisions, adopted for various pathological conditions, is shown.

When ventral hernia exists it has taken place through tissues deficient or devoid of innervation, and in restoration it is necessary to excise the redundant and atrophic tissues, bringing into the wound area as much muscular fiber as possible. It is not always necessary to enter the peritonæal cavity. In closing the abdominal wound the peritonæum is united by a continuous suture of fine catgut. Then a stout,

well-curved Hagedorn needle, threaded with silkworm-gut, enters the skin a quarter of an inch from the edge of the incision, passes through the superficial fascia, including muscular tissue and associated fibrous structures, picks up the sub-peritonæal areolar tissue and peritonæum near the border of the wound, passing up through like structures on the opposite side in reverse order. This modified mass suture does not interfere with accurate apposition of like structures, and yet makes the bond of union strong. After all the sutures are in place, and bleeding checked, the wound is raised by the sutures, in the hands of an assistant, the protecting gauze removed and the sutures tied.

*A Study of Eighty-one Cases operated upon under Analgesia obtained by Subarachnoid Spinal Cocainization.*

GEORGE RYERSON FOWLER (*The Medical News*, Jan. 5, 1901) divides his cases into the following classes: (1) Operations involving the peritonæum, twenty-six cases; (2) operations in the pelvic region not involving the peritonæum, thirty-four cases; (3) amputations, five cases; (4) operations upon the lower extremity not included above, thirteen cases; (5) three unclassified cases, viz.: costal resection, nephrectomy, and incision of the abdominal wall for dermoid cyst.

Under the first class, analgesia was incomplete in five cases, and chloroform had to be administered in two instances to complete the operation. In all the cases of abdominal section there was some difficulty arising from vigorous peristalsis of short sections of the intestinal canal, the contracted areas resembling hard, fibrous cords and presenting sharp borders between the contracted and non-contracted portions, suggesting an imminent intussusception. The patients complained of discomfort when extreme pelvic elevation was maintained. There was somewhat more difficulty in retracting the edges of the abdominal wound than under general anæsthesia. In class second, in one case consciousness of pain returned before the perineorrhaphy was completed, and general anæsthesia was required. In class three, the analgesia was complete, and of sufficient duration for the operation. In the fourth class of cases was included a tenosynovitis, in a child of ten, in whom but 5 minims of a 2-per-cent. solution was at first injected; this was found insufficient after fifteen minutes, and the dose was repeated with satisfactory results. In a case of supramalleolar osteotomy, the patient could tell which bone was being chiseled, but felt no pain. The patient upon whom costal resection was performed was in such a condition as to absolutely



prohibit general anæsthesia. Pain was complained of when the periosteum and intercostal nerve were peeled from the bone.

While the technique of lumbar puncture seems simple, it is not always easy to locate the points of the spinous processes in very fat people or in nervous people who stiffen the muscles. The use of a double needle prevents occlusion of the lumen of the instrument, for the inner needle can be removed. The inner, finer needle should project beyond the other for half an inch, and should be only just large enough for the fluid to flow through. Aspiration will enable the operator to control the amount of fluid removed and preserve the fluid for examination, or for use as a solvent for the cocaine to be injected. A full minute should be allowed for the injection and a concentrated solution of a definite quantity produces no more unpleasant symptoms than the same dose in a dilute solution, and the effect of the former lasts longer. The extent and duration of the analgesia depend, probably, on the amount of cerebrospinal fluid present in the individual case, an extreme quantity lessening both. A preliminary injection of cocaine at the site of the proposed puncture is always used by the writer. In most of the cases reported there were the usual unpleasant symptoms present, to greater or less degree. They are evidently not due to the drug, as the same effects follow the use of other drugs, and in one case followed the withdrawal of the cerebrospinal fluid before any injection was made. All the symptoms seem to be lessened by the preliminary use of a tenth of a grain of strychnia given hypodermically.

The cases reported were not selected, except that many of them, for various reasons, were deemed unfit for general anæsthesia, but these showed, as a rule, less alarming symptoms than the young and vigorous patients.

Antipyrin alone was tried in two cases. In the first case, the patient was a stolid Italian woman, who spoke no English, and it was impossible to find out if analgesia was complete. In the second case, it was a failure. Chlorotone also failed. A combination of antipyrin and cocaine seemed more efficient than cocaine alone, but not enough cases have been tried to enable one to speak authoritatively. In spite of the favorable results obtained by the writer, he believes that the ideal anæsthetic is one which, with absolute safety, renders the patient entirely oblivious, not only to pain, but to the many disagreeable features surrounding an operation, and to the dread and nervous strain incident to consciousness.

THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

---

APRIL, 1901.

---

THE TREATMENT OF DISPLACEMENT OF THE UTERUS.  
WITH ADHESIONS.

BY F. H. DAVENPORT, M.D., BOSTON, MASS.

I have taken up this trite subject for two reasons. In the first place, this condition is one which I think the profession has too often neglected, owing to the belief in the difficulty of accomplishing anything without serious operation, and in the second place, on account of the serious nature of the cause—acute or chronic pelvic peritonitis—undue importance has been attached to *it* rather than the results. The impression is apt to be gained and acted upon that the damage has been done, and very little can be accomplished for the relief of symptoms *in the later* stages of the trouble. Adhesions occur, as a rule, after localized pelvic inflammation. The usual course of events is as follows: A patient in the course of some acute or possibly chronic inflammatory affection of the vagina, and later of the uterus, and still later of the Fallopian tube, suffers from an attack of pelvic peritonitis. This may or may not be acute enough to confine the patient to bed. However that may be, the result is a congestion and swelling of the peritonæum, followed by an exudation of lymph, and later an adhesion of opposing peritonæal surfaces in some part of the pelvic cavity. The extent of such adhesions varies in each case. There may be merely a glueing together of the fimbriæ of the tube, and thus a closing of the ostium abdominale. In other cases the fimbriæ may become permanently attached to the ovary, and the tube drawn out of place. More extensive inflammation results in the implication of Douglas'

---

\* Read by invitation before the Cambridge Medical Improvement Society, January 28, 1901.

cul-de-sac, and the agglutination of the posterior surface of the uterus to the anterior surface of the bowel, and the more or less complete obliteration of the peritonæal pouch. If the inflammation is as extensive as this, as the process subsides, there is a gradual contraction of the plastic material thrown out, and the result is a displacement of the uterus backwards. The whole cul-de-sac may be involved, or only a small portion of it. In the one case we have a firm mass of adhesions covering the whole posterior surface of the uterus: in the other, isolated bands attaching some portion of the body to the bowel. The uterus is maintained in its normal position so loosely that any slight traction in one direction or another is sufficient to modify its position. This is particularly true as regards retrodisplacements, and the contractile force of light adhesions is sufficient to draw the uterus backwards. For a time after any such inflammatory process the symptoms arising from the original disease are the most important. There is tenderness throughout the pelvis, pain on exercise, soreness of the lower abdomen, and more or less constitutional disturbance. In some cases attack follows attack at short intervals, each resulting in greater damage and more extensive adhesions. In other cases the disease is confined to a single attack, and the results are limited. Many of the cases we see come to us after the original disease has run its course, and the problem we have to solve is what to do to relieve the symptoms which remain. The question, then, is whether the symptoms of which the patient complains are due to the original trouble, namely, the peritonitis, or whether the resulting displacement is the cause of her discomfort.

There are certain symptoms which point very clearly to the displaced uterus as the cause of the trouble. On bimanual examination we find that there is an absence of any general sensitiveness. The peritonæal irritation has disappeared. The only sensitiveness that we find is that caused by attempts to lift the uterus from its position, and this is usually complained of by the patient as pain in the back or rectum. If the ovaries are adherent as well, they are usually displaced, brought nearer the vagina, and immovable, and pressure upon them causes more pain than upon normally placed ovaries. There is discomfort on walking, backache, a feeling of bearing down and pressure on the rectum, and there is also very apt to be an annoying sense of some body in the rectum itself. Constipation is an important factor. Attempts to lift the uterus from its displaced position by the finger are futile. The amount of mobility will, of course, be directly proportionate to the amount of adhesions present. One is tempted in

these cases in the absence of acute symptoms to feel that any treatment short of operation is hopeless, and to dismiss the patient with the advice to get along as well as she can.

While it is true that many women may for a long time have a retroversion without symptoms, this, in general, applies to those cases of simple retroversion without adhesions, and not to the class of cases under consideration. Here we almost invariably find symptoms, and not merely those which are characteristic of the simpler form, but certain additional discomforts which are the direct results of the adhesions. These may be vague, or well marked, but in either case it seems to me that they are peculiar to this complication. Some of them can be directly explained by the anatomical conditions present. A displaced uterus, if non-adherent, has still sufficient mobility to change its position with the varying degrees of congestion present, and to a certain extent to adapt itself to the various positions of the body. On the contrary, if the uterus is bound down by adhesions there will be tension, and stretching of the peritonæum when the organ is filled with blood, and this will be evidenced to the patient by a sensation of aching or burning in the pelvis. If the state of congestion is chronic, it will be present more or less of the time. If the congestion is confined to the menstrual period, the symptoms will at that time alone become troublesome. If the ovaries are involved, there will be distress in the ovarian regions, particularly in the few days preceding menstruation. An adherent uterus will press more continuously and annoyingly into the rectum, and in addition the presence of adhesions connecting the bowel with the pelvic organs is very productive of chronic digestive disturbances. It is, therefore, evident that the presence of adhesions brings with it its own train of symptoms. The question then becomes an important one whether something may not be done to ameliorate the local symptoms, and secondarily improve the general health of the patient.

The first thought to occur to the surgeon is whether the adhesions can be broken. It has been claimed that this is possible, and elaborate directions for its performance have been formulated, especially by German gynæcologists. Under ether, by a combination of vaginal and rectal manipulations, the uterus has been forcibly replaced, and, as far as can be judged from the sense of touch alone, adhesions broken. There are two objections to this plan. In the first place, any method which involves so much force applied blindly to organs which may themselves be diseased, is too dangerous to be used except under the most favorable circumstances. In these days of the extension of abdominal surgery, and its remarkable freedom from mortality, opening the



abdomen and breaking up the adhesions under the eye is, to my mind, a much less dangerous procedure. In the second place, even if the adhesions are broken up, there is nothing done to prevent their reforming immediately and the patient's condition becoming as bad as before.

Some of the symptoms from which these patients suffer are clearly due to a moderate prolapse of the uterus. Being heavier and drawn out of place by adhesions, it lies lower in the pelvis than it should. The patient will complain of bearing down and weight in the pelvis, and will experience relief if the uterus is supported even by a tampon. Following this idea, the adjustment of a pessary has been advocated, with the idea of raising the uterus higher, and so relieving the symptoms. Without previous treatment this may or may not be wise. It is possible that even the most simple form of pessary may, by exerting pressure on some unusually sensitive structure, make the patient worse, instead of better, and, while the main idea is correct, it is wiser to precede it with some preparatory treatment, of which I shall speak later.

It seems to me clearly demonstrated by my experience in these cases, that at the first examination it is often impossible to judge correctly, either as to the extent of the adhesions or their character. Cases which at first have seemed to me almost hopeless, have readily improved with comparatively little treatment; while, on the other hand, cases where the adhesions seemed trivial have proven the most rebellious. Therefore, at the outset, no well-grounded prophecy can be made as to the outcome of the treatment.

On examination in a given case we find the following state of things: The examining finger recognizes, in the first place, that the uterine body is easily felt through the posterior cul-de-sac. On attempting to lift it from its position it refuses to yield. On both sides of the uterus, more or less continuous with it, are firm, hard masses of tissue, also immovable and of irregular shape. These may extend laterally as far as the finger can reach, and the resulting mass nearly fills up the whole pelvis. Individual organs can not be differentiated. Uterus and ovary and tube are joined together and surrounded by plastic material, and that is as far as any accurate description can go. Pressure on different parts of the mass may elicit varying degrees of pain and sensitiveness.

With these conditions present, I have found the following method of treatment useful in a certain number of cases, and the most satisfactory in my hands. It is useful both from a diagnostic point of view and as a therapeutic measure. It is a combination of packing and massage, followed by the use of a support. Having placed the patient

in Sims' position, I proceed to pack the vagina quite firmly with pledgets of cotton soaked in glycerine. Piece after piece is placed in position, posteriorly first, so as to fill the cul-de-sac, then laterally, and then in front, until the upper two-thirds of the vagina is completely filled. To be effective, this packing must be very carefully and thoroughly carried out. A simple tampon, or a few pieces of cotton, pushed into the upper part of the vagina, with the patient on the back, will not answer the purpose. It is pressure that is wanted, and this can only be secured by a careful and systematic packing. The addition of glycerine to the cotton is of importance. By its depleting effect it relieves the congestion of the pelvic organs and promotes the absorption of the plastic material. The first packing should be allowed to remain two days. It then becomes so loose, owing to the stretching of the vagina, that it is of no use, and should be replaced. It is also important not to use too much force with the first packing, as the tolerance of the patient to pressure must first be tested, and there may be more sensitiveness in the pelvis than the first examination would reveal. At the second visit the treatment should be repeated, and a firmer packing substituted. This may be left two or three days, according to circumstances. If allowed to remain beyond that time it is apt to become foul. After two or three such treatments, the condition of the pelvic organs should be again investigated, and what I call massage should be added. After the packing has been removed, the patient is placed upon the back and an attempt made to dislodge the uterus. With a double hook in the anterior lip, the uterus is drawn down as far as it can be without causing too much pain to the patient, and with one or two fingers in the vagina the uterus is lifted. If bands of adhesions are felt, they may be stretched and lightly massaged, and the same done to the masses at the sides. Usually this causes the patient some pain; it should, therefore, not be prolonged beyond a very few minutes. The packing is then removed, and the same process repeated after two or three more treatments.

Definite results, either positive or negative, should show themselves in the course of two or three weeks' treatment. The interval between two menstrual periods is usually sufficient to demonstrate how much, if anything, can be done for the relief of the patient. In the obstinate cases, perhaps little more can be done than to lift the uterus a little higher, relieve the pelvic congestion, and in so far make the patient more comfortable, but in many cases there will be more marked improvement than that. It is surprising how, under this treatment, there will be a softening and disappearance of exudates, and such a

stretching of the adhesions that the individual organs can be demonstrated. The uterus attains a more normal position; the inflammatory masses at the sides of the pelvis diminish in size: tubes and ovaries can be differentiated, and the sensitiveness markedly diminished. At the approach of menstruation, a well-fitting pessary should be applied for the patient to wear during the menstrual period. This should not have too great a curve, but only sufficient to maintain the uterus in its improved position. From the patient's standpoint, the results of the treatment are usually very satisfactory. From the very first treatment she will feel better. Locally, there will be a diminution in the sensitiveness, a relief to the pressure, and increased ability to walk and to take exercise. There will also be a general improvement. Headaches will diminish and digestive disturbances be relieved. If the improvement has been marked, I think it well to suspend active treatment for a few months, and then try another course of packing and massage. In other cases, where the gain is but slight, the same treatment may be carried out for the second month.

Of course, most of these patients are sterile, but the presence of retroversion, with adhesions, need not necessarily be an absolute hindrance to conception. I have had more than one patient who presented this condition of affairs before marriage, and where an abdominal operation for the removal of the adherent appendages was advised. Under this method of treatment, however, the condition became so much improved that they married and have had children. If pregnancy does occur in a uterus bound down, the danger of miscarriage in the first three months is very great. Such a patient should be carefully watched, and, as the uterus enlarges, it should be pushed up into the abdominal cavity by tampons or held up by a pessary until it is too large to become impacted under the promontory of the sacrum. If pregnancy goes on successfully beyond that time, the adhesions will become permanently removed and will not reform after labor; therefore, pregnancy is the best possible cure for this condition.

A word as to operations. If the adhesions are very dense and little can be accomplished by the method of treatment I have prescribed, and the patient's sufferings are so marked as to make it imperative that something should be done, an abdominal operation for the relief of the condition should be undertaken. It should, however, be a radical one. It is of very little use merely to break up the adhesions forcibly and stitch the uterus to the anterior abdominal wall. The raw surfaces which are left after the adhesions have been

separated will almost certainly reunite, and, in a short time the patient's condition will be as bad as before. It is better under these circumstances to remove the appendages and to amputate the uterus. By this means the diseased and useless organs are removed and the possibility of reinfection is prevented. As such patients are usually sterile, the question of pregnancy need not be taken into account.

Following out the main idea of this paper, it seems to me that something might be done soon after an acute attack of pelvic peritonitis to limit the amount of damage done, and to leave the patient in a better condition. As soon as the acute sensitiveness has gone, I would begin with the use of glycerine tampons, trying to keep the organs in their normal position, and to relieve congestion, and promote absorption. In this way future suffering might be materially lessened.

In conclusion, I would say that no matter how hopeless the case seems, no matter how bound down and involved the pelvic organs are, there is a possibility of so bettering the patient's condition by this simple method of treatment that I can very confidently urge its trial, even in what would be called desperate cases.

---

#### CAUSES OF DYSMENORRHŒA.\*

BY ALBERT M. JUDP, M.D., BROOKLYN, N. Y.,

The paper to-night is particularly directed to the relation of the various displacements and pathological conditions of the uterus and its adnexa to the symptom dysmenorrhœa. The material from which I have drawn my ideas has been, in the main, over 700 cases which have been seen and examined at the Polhemus Memorial Clinic. Each case has been examined by at least two of us who work there, thus making a fairly sure diagnosis. It has been with great hesitation that I have embodied my ideas for reading before the body of learned and experienced men here assembled, and for publication later, as they seem so much at variance with the generally accepted theories. It seems to me almost sacrilegious to differ from such men as J. Marion Sims, the idolized gynæcologist of gynæcologists, Sir James Y. Simpson, Emmett, Thomas, and many others of the forefathers of gynæcology, but, as Rastus says, "The world do move." The

---

\* Read before the Brooklyn Gynecological Society, March 7, 1901.



men from whom we gain most of our ideas have taught us, both by lectures and text-books, that dysmenorrhœa is classified into neuralgic, congestive or inflammatory; obstructive, ovarian, and membranous. Dr. Montgomery, of Philadelphia, Pa., in his text-book of gynæcology, published in 1900, has taken, it seems to me, a step in the right direction, as he mentions dysmenorrhœa as a symptom only, but he has not gone far enough in this direction, as he has written me in answer to a communication of mine that he still teaches the old classification in his lectures before the students. I hope I may interest some of the teachers here present, and also hope that they can agree with me, in some of my ideas at least. I personally believe it is much better to discard all attempts at classification, and speak of painful menstruation as a symptom, just as pain is a symptom of appendicitis or of intestinal colic. Our great difficulty in studying it lies in the fact that we do not yet understand the physiology of menstruation. The most reliable study of this subject is that of Walter Heape, who made a careful study of the process in monkeys, by microscopical preparations taken at different stages of the menstrual cycle. I will now present the tabulation of cases I have made, and then draw conclusions.

|               |  |
|---------------|--|
| Anteversion   | 3 cases without pain,<br>3 cases with pain.  |
| 50 per cent.  | 6  |
| Retroversion  | 71 cases without pain,<br>28 cases with pain before,<br>77 cases with pain before, and extending into the<br>period.                     |
| 59 per cent.  | 176  |
| Lateroversion | 0 cases without pain,<br>1 case with extreme pain, but pain had existed<br>only since existence of uterine metritis and<br>perimetritis. |
| Anteflexion   | 9 cases without pain,<br>9 cases with pain before,<br>19 cases with pain before, and extending into the<br>period.                       |
| 75 per cent.  | 37   |

---

|              |   |
|--------------|---|
| Retroflexion | 2 cases without pain,<br>3 cases with pain. |
|--------------|---|

---

|              |   |
|--------------|---|
| 60 per cent. | 5 |
|--------------|---|

|               |                 |
|---------------|-----------------|
| Lateroflexion | None tabulated. |
|---------------|-----------------|

|              |   |
|--------------|---|
| Retroposited | 3 cases without pain,<br>0 cases with pain. |
|--------------|---|

|           |  |
|-----------|--|
| Prolapsus | 8 cases without pain.<br>10 cases with pain. |
|-----------|--|

---

|              |    |
|--------------|----|
| 55 per cent. | 18 |
|--------------|----|

*Combination Displacements.**Without Pain.*

|                                     |         |
|-------------------------------------|---------|
| Anteflexion with retroversion ..... | 4 cases |
|-------------------------------------|---------|

|                                   |         |
|-----------------------------------|---------|
| Anteflexed and retroposited ..... | 2 cases |
|-----------------------------------|---------|

|                                      |         |
|--------------------------------------|---------|
| Retroversion with retroflexion ..... | 5 cases |
|--------------------------------------|---------|

---

11

50 per cent.

*With Pain.*

|                                 |        |
|---------------------------------|--------|
| Anteflexed and anteverted ..... | 1 case |
|---------------------------------|--------|

|                                     |         |
|-------------------------------------|---------|
| Anteflexion with retroversion ..... | 2 cases |
|-------------------------------------|---------|

|                                   |        |
|-----------------------------------|--------|
| Anteflexed and retroposited ..... | 1 case |
|-----------------------------------|--------|

|                                    |        |
|------------------------------------|--------|
| Retroflexed and retroposited ..... | 1 case |
|------------------------------------|--------|

|                                   |         |
|-----------------------------------|---------|
| Retroverted and retroflexed ..... | 6 cases |
|-----------------------------------|---------|

---

11

Number of cases subjects of laceration, with endometritis, 217, of which 108 had dysmenorrhœa and 109 did not.

Number of cases subjects of diseased appendages, 177, of which 107 had dysmenorrhœa and 70 did not.

You see from a review of the list that many had premenstrual pain. Some hold that the cause is the excessive muscular activity, vermicular in character, of the Fallopian tubes, which are inflamed, and the so-called automatic menstrual ganglia are thus excited to increased reflex activity, and cause the pain; but as this action of the tubes must continue during the whole of the menstrual cycle, the reasoning does not seem to me to be convincing. There might, it seems to me, be pain preceding the menstrual flow, due to the attempted development of the Graffian follicles through a thickened tunica albu-

ginea and stroma, which condition is found in chronic inflammatory conditions of the ovaries, and which hyperplasia, of course, resists the swelling following upon the natural congestion of the organs prior to the menstrual periods and gives pain just as an inflammation of the testicle will give pain because there is not room for swelling to take place.

In the six cases of anteversion tabulated, 50 per cent. had painful menstruation, but those having it were subjects of greater amount of metritis and endometritis than the remaining cases.

In the 176 cases of retroversion, of which 59 per cent. suffered from dysmenorrhœa, the same facts hold true, and although of the remaining 41 per cent. the great majority suffered more or less from metritis and endometritis, yet we find that the general, or, at times, the local, neurotic condition of the patient must be a great consideration.

In the thirty-seven cases of ante flexion, 75 per cent. were subjects of painful menstruation, thus seemingly upholding the theory of obstruction in cases of ante flexion; but I again find metritis and endometritis in those cases having dysmenorrhœa, and nothing appreciable in the remaining cases except the flexion.

This subject of the relation of ante flexion to dysmenorrhœa was well argued by L. Ernest Herman, London, in a paper read before the Obstetrical Society of London, in 1881, in which he arrived at the following conclusions:

1. That there is no anatomical evidence that ante flexion causes any appreciable hindrance to the escape of menstrual fluid.
2. That there is reason to think that well-marked ante flexion is present in nearly half of all women who have not borne children.
3. That, therefore, it is to be expected that ante flexion and dysmenorrhœa would frequently coincide.
4. That dysmenorrhœa is practically as common when the uterus is ante flexed as when it is not.
5. That when dysmenorrhœa and flexion go together, the severity of the pain bears no relation to the degree of the bending.
6. That dysmenorrhœa, associated with ante flexion, is frequently cured without straightening the uterus.
7. That there is no evidence that straightening the uterus invariably or frequently removes dysmenorrhœa which is associated with ante flexion, and in which other methods of cure have been ineffectual.
8. That these facts tend to show that the relation between ante-

flexion and painful menstruation is not that of cause and effect, but merely that of coincidence.

The same stand was also well taken in a paper by C. D. Palmer, of Cincinnati, O., occurring in the *Cincinnati Lancet and Clinic*, of April, 8, 1882, entitled "An Inquiry into the So-Called Mechanical Nature of Dysmenorrhœa," and in which he came to practically the same conclusions.

I grant that in the flexions we must have some obstruction, particularly in the aggravated and long-standing cases, and in those cases that are retroflexed and adherent, but in a movable flexion, I think the erection of the uterus, which takes place on the influx of blood at time of the period, does away, in great part, with the obstruction from the flexion.

The same holds true of the five cases of retroflexion, of which only 60 per cent. had dysmenorrhœa, while in the one case of latero-version, with very painful menstruation, the pain had existed only since the existence of uterine metritis and perimetritis. With the cases of prolapse the same holds true again, only 55 per cent. of the eighteen cases having pain; but here the patient's nervous system is a larger element, as we find that many laboring-women carry around a prolapsed uterus for many years, with very little discomfort.

Of the three subjects of retroposed uteri, none had pain. Of the combination displacements, 50 per cent. had pain. When you take into consideration the subjects of laceration, with endometritis, and those subjects of diseased appendages, we have, in great part, to consider here only the congestive theory, aided by the local neurotic condition.

The obstructive theory was given its first impetus by Macintosh, of England, in 1832, when he reported dilatation of the uterine canal in twenty-seven cases, of which twenty-four were cured. The same doctrine has received further impetus from Sir James Y. Simpson and Marion Sims, and, of course, on both continents, by their followers, who are legion. Marion Sims has said that there could not be dysmenorrhœa, properly speaking, if the canal of the uterus were straight, and wide enough to permit free passage of menstrual blood. In the first place, if we will only stop to consider the amount of fluid given off during each period, and the size of the stream which is passing through the canal, I think you will be surprised. Allowing four days for a menstrual period, and two ounces of fluid for each day, which is probably an excess in most cases, we have some forty drops emitted each hour, or two-



thirds of a drop each minute, such a small quantity as, it seems to me, should pass through most any cervical canal without any trouble. I suppose some one will say that in the cases having pain the discharge is intermittent, but even so, when you examine such menstrual discharge you will find large shreds of membrane and clotted blood, and the character of the discharge is certainly not due to any supposed obstruction, but to the condition of the uterus as regards its circulation, which may be impeded by some deformity or deflexion, and also the condition of its mucous membrane which would naturally follow upon such an impeded circulation.

Does the quantity of menstrual fluid coincide with degree of pain? We all know that it does not, as really the majority of the dysmenorrhœics who suffer the greatest pain have a scanty flow, and increase the flow by means of ferruginous tonics, and pain is diminished or disappears altogether. Again, many cases of dysmenorrhœa are cured or improved by a change of climate or surroundings. The seeming obstruction still exists, but the patient's nervous system is improved by the change and the local manifestation of a diseased nervous system disappears.

Many will say that they have cured dysmenorrhœa by dilatation of the cervical canal. Very true, but I think the cure was due, not to the fact that the canal is left appreciably larger than before, but because of overcoming the tension of the circular muscular fibers, which act as an obstruction simply because they are caused to contract, because of the surrounding conditions of endometritis and increased reflex activity of the uterine and extra-uterine ganglia. Diminish this, and you cure your dysmenorrhœa. Dilate, and you cure or relieve for a time, some cases having relief for a long time and others for a short time only, as your history books will show. In attempting to pass a sound into the uterus you will find many cases have an excessive sensitiveness when sound passes internal os, and its withdrawal is followed by a drop or more of blood. Why cannot there be present a condition of fissure similar in character to that which occurs at neck of bladder or at anus? And your cure results from practically the same treatment when you dilate and curette.

Membranous endometritis, or dysmenorrhœa, as it is called, I have purposely omitted for two reasons. In the first place, I have had very little experience with it; and, secondly, it seems to me to be of sufficient importance to deserve an evening and paper devoted to it exclusively.

To sum up, most cases of dysmenorrhœa are due to congestive

inflammatory conditions of the uterus and its adnexa, varying from a simple endometritis to a metritis or perimetritis, or prolonged inflammation of the adnexa, aided by the local neurotic condition of the pelvic ganglia, which condition may be congenital, or brought about or aggravated by the inflammatory conditions of the pelvic organs. In a certain proportion of cases the neurotic condition is a larger element in the causation of the pain than the inflammatory condition. The volume of cause, so to speak, must of necessity vary with the individual.

## THE CAUSES AND THE SIGNIFICANCE OF THE OBSTETRIC HÆMORRHAGES.

BY J. CLIFTON EDGAR, M.D., NEW YORK.

Obstetric metrorrhagia, can, we believe, be most conveniently discussed, by dividing the subject into three divisions, namely:

1. *The metrorrhagia of pregnancy, or antepartum hæmorrhages.*
2. *The metrorrhagia of labor, or intrapartum hæmorrhages, and*
3. *Puerperal metrorrhagia proper, or secondary postpartum hæmorrhages.*

1. *The metrorrhagia of pregnancy; antepartum hæmorrhages.*—Uterine hæmorrhages, moderate or severe, occurring during the forty weeks of pregnancy naturally suggests to our minds the six queries: (1) Is it a simple abortion or miscarriage? (2) Is it a case of placenta prævia? (3) Is it a premature separation of a normally situated placenta (accidental hæmorrhages)? (4) Is it one of ectopic gestation? (5) Is it a traumatic or spontaneous rupture of the uterus? (6) Is it menstruation occurring during gestation?

These are the principal etiological factors in antepartum hæmorrhage; still it should always be remembered that the diagnosis must be confirmed by a careful consideration of the symptoms and signs present, since we observe, although less frequently antepartum hæmorrhage due to the fever and local hyperæmia of the (1) exanthemata, as variola, scarlatine, and measles: (2) to conditions of the heart, liver, and abdominal viscera producing obstructed venous return; (3) to hæmatosalpinx; (4) to sarcoma, fibroma and polypus of the uterine body; and (5) to polypus and epithelioma of the cervix. Less frequently still antepartum hæmorrhage, local in character, but non-uterine

---

\*Read before the Medical Association of the Greater City of New York, February 12, 1901.

in origin, has been mistaken for one of the six main causes just stated. These hæmorrhages, usually slight in amount, come from (1) the urethra, due to causes in the urinary tract; (2) from rupture of vaginal or vulval varicose veins; (3) from cancer of the vagina or vulva, and (4) from anomalies of the intestines or anus, a common one being hæmorrhoids.

Most frequent and most important of the antepartum hæmorrhages is the bleeding indicative of a threatened or inevitable abortion, which is due to a partial separation of the foetal structures before the complete formation of the placenta. All the manifold and varied causes of abortion and miscarriage have to do with this variety of hæmorrhage. The possibility of menstruation continuing into pregnancy must also be granted.

While it is true that menstruation is nearly always suspended during the whole period of gestation, recurring again six to eight weeks after the birth of the child, still exceptions to the condition of suspended menstruation in pregnancy occur now and then during the early months, and are explained by the fact that the uterine cavity is not obliterated by the fusion of the decidua reflexa and vera until the close of the fifth month. In case the menses continue throughout pregnancy, a very rare condition indeed, there is probably an abnormal and incomplete fusion of the deciduæ. Some cases have been reported of women who menstruated only during pregnancy. Such reports should be carefully criticised, as such cases probably depend, without exception, on pathological conditions of the cervical canal.

From an examination of a large number of membranes and placenta, the result of interruptions of pregnancy in the third, fourth, fifth and sixth months, I am convinced that hæmorrhage due to a low situation of the placenta is much more common than is usually supposed. I mean by this, that a large portion of the supposedly simple abortions and miscarriages are really instances of the implantation of the placenta in the lower uterine segment, with resulting hæmorrhage and evacuation of the uterus as a consequence of partial separation of the abnormally situated placenta, due to changes in the shape of the lower uterine segment dependent upon the growth of the uterus.

It is generally thought, and usually taught, that hæmorrhage from a placenta prævia does not show itself until the twenty-eighth or thirty-second week of gestation. I have in my collection a uterus with the foetus and membranes intact, and a central placenta prævia, from a woman who died within a few hours from the first hæmorrhage, at the sixteenth week of pregnancy. A careful autopsy showed

that death was due to the acute anæmia produced by the hæmorrhage from the partial separation of the central placenta prævia. Further, I am convinced that a careful study of the site of rupture of the membranes, instances of supposedly accidental hæmorrhage, will prove that hæmorrhage during pregnancy and also during parturition from the premature separation of a normally situated placenta is a very, very rare condition indeed. I have found that several cases of presumed accidental hæmorrhage were really those of lateral placenta prævia; a more complete examination after fuller dilatation and the examination of the rupture in the membranes postpartum indicating the condition that caused the hæmorrhage. Severe hæmorrhage from the partial separation of a normally situated placenta I believe to be a very rare condition; severe hæmorrhage from a low implantation of the placenta I believe to be much more common than is generally believed.

*2. The Metrorrhagia of Labor; Partum or Intra-Partum Hæmorrhage.*

For convenience sake I am accustomed to describe intra-partum hæmorrhages as those of: (1) The first and second stages, and (2) of the third stage.

*1. Intra-Partum Hæmorrhage of the First and Second Stages.*—These are due principally to: (a) *Premature separation of a normally or abnormally situated placenta*; (b) to ruptures of the uterus or cervix; and (c) to fibroid tumors, malignant disease of the genital tract, or rupture of varicose veins.

*2. Intra-Partum Hæmorrhage of the Third Stage.*—Here, first and foremost stands, (a) *uterine inertia* as the most important etiological factor; uterine inertia occurring with a partial or complete separation of the placenta. Next in importance comes, (b) *lacerations of the genital tract*, namely, of the lower uterine segment, the cervix, vagina and perinæum. Another important cause, not often taken into account is, (c) *insufficient contraction of the lower uterine segment in cases of low implantation of the placenta*. Here, while the fundus contracts firmly and completely, an imperfectly contracted lower segment permits of fatal hæmorrhage from the open blood-vessels of the low situated placental site; (d) *partial or complete inversion*, although a most infrequent cause, must be enumerated, and the likelihood of *fibroids* of the uterus or *cancer* of the genital tract must be borne in mind.

*3. Puerperal Metrorrhagia Proper, or Secondary Post-Partum Hæmorrhages.*

Puerperal hæmorrhages are those occurring from six hours after



the completion of the third stage of labor until the completion of the normal period of involution, namely six weeks. These hæmorrhages depend almost wholly upon the proper management of the second and third stages of labor, and the care the woman receives during the first few hours or days of the lying-in-state. The amount of the lochial discharge varies in different women. In some it always continues longer and is more abundant, yet not enough to justify us in calling the case one of secondary post-partum hæmorrhage. As in intra-partum hæmorrhages so in post-partum, the hæmorrhage may come on in so sudden, so unexpected a manner that there will be no premonitory symptoms of the accident, the external flow of blood being the first symptom.

The causes are *general* and *local*. 1. *Among the general causes are:* (1) Mental emotions, as shock, anger, fright, fear; (2) disturbances of the general circulation, as from abuse of stimulants, the excessive use of chloroform, certain conditions of the heart and liver that interfere with the return circulation; (3) certain blood conditions, as extreme malarial poisoning, albuminuria, and puerperal sepsis; (4) the acute infectious diseases.

*Among the local causes are:* 1. Anything which interferes with the proper contraction of the uterus during the puerperium, as (a) retained blood-clots, portions of placenta or membranes; (b) a secondary placenta; (c) a distended bladder or rectum; (d) retroflexion; (e) inversion; (f) fibroid and polypoid tumors; (g) cervical lacerations; (h) malignant disease of the uterus; (i) simple subinvolution.

2. The causes inducing pelvic hyperæmia are: (a) Assuming the upright position too soon after delivery; (b) too early sexual intercourse.

3. Thrombi, which close the uterine sinuses, may be dislodged by sudden exertion, or by septic processes in uterine phlebitis. Uterine inertia or relaxation as a cause of hæmorrhage, after the third day of the puerperium, is of rare occurrence; retained blood-clots are more frequent in multipara, and may usually be prevented by careful attention to the uterus during the hour following the completion of the third stage, known as "the physician's." Hæmorrhage from retained placental fragments and membranes are due to an incomplete third stage, and may be prevented by careful examination of placenta and membranes at time of expulsion and removal of retained fragments. The retention of small pieces of membrane, it must be remembered, do not necessarily produce puerperal hæmorrhage or other complication.

50 East Thirty-fourth street.

## OSTEO-FIBROMYOMA OF THE UTERUS.\*

*(With Discussion.)*

BY GEORGE BEN JOHNSTON, M.D., RICHMOND, VA.,

Professor of Abdominal Surgery and Gynæcology in the Medical College of Virginia; Fellow of the American Surgical Association.

The rarity of the occurrence of osseous deposits in the uterine wall was well set forth by Dr. C. Jeff. Miller in his report, "A Case of Ossification of the Uterus," read before the Association at its last meeting. In this report he stated that a thorough review of the literature on this subject showed a record of but six cases of ossification of the uterus since 1759, his being the seventh in all, and the first reported since 1852. My own review of obtainable literature verifies the facts as stated by him.

Whether this scant record be due to the exceeding rarity of its occurrence, or in part to the carelessness of observers in recording so unusual a case whenever met with, would be a difficult question to solve. It is, however, striking, after a lapse of nearly half a century, in which no case has been recorded, that two members of a society with a membership of one hundred and forty-three should, in successive years, meet with this strange phenomenon.

The case I have to report is that of Mrs. S., a woman of thirty years of age. She was the mother of three children, the youngest being three years old. About two years after the birth of the youngest child she noticed some enlargement of the abdomen, and at times experienced difficulty in voiding her urine. She believed herself pregnant, but on account of the continuance of her menses and increasing difficulty of micturition, she consulted her physician, Dr. W. R. Sanders, of Max Meadows, Va., and an examination of the genital organs was made. This disclosed a tumor, which filled the pelvic cavity, growing from the posterior wall of the uterus and so displacing the uterus forward that it pressed upon the bladder. Six months later she missed her menstrual period, and by this time her size had greatly increased, and her ability to void her urine normally was almost lost. She was a woman of active habits, and continued to perform the hard work constituting the housewifely duties of her class. About the middle of March, 1900, after being all day upon her feet, a severe

---

\* Read before the Southern Surgical and Gynæcological Association, Atlanta, Ga., Nov. 13, 1900.

hæmorrhage occurred, and the next day she passed a fœtus of six or eight weeks' development. Hæmorrhage was promptly checked, but her size did not reduce and the pressure symptoms continued.

I operated upon her at the Wytheville Sanatorium, conducted by Dr. John T. Graham, on April 10, 1900. Bimanual examination, made before the operation, revealed two tumors, one a large fibromyoma, situated posteriorly and to the right of the uterus; the other was a small tumor, anterior and to the left. Complete hysterectomy was performed. The smaller tumor was found to be intramural, and situated at the junction of the body and the neck. On liberation the macroscopic examination showed a tumor about the size of a small orange, and of firm consistence. Held between the thumb and fingers, it gave the sensation that is produced by pressing a hard-boiled egg, the shell of which has been broken. Plates, apparently of bone, encompassed the surface, and on opening it a substance resembling medullary tissue or brain was found. This was, unfortunately, lost, so that no subsequent histological study of it could be made.

Attached to the lower part of the osseous tumor was a small, fleshy mass, which contained a body about an inch in length, resembling a heart in shape. Dr. Graham, who assisted in the operation, suggested the possibility of an ectopic pregnancy, with skull and heart partly developed.

On opening the uterus, a recent placental site was found near the uterine opening of the right Fallopian tube.

Microscopical examination of the tumor, made by Dr. B. M. Randolph, Lecturer on Pathology in the Medical College of Virginia, developed the following characteristics: It was covered by a fibrous capsule, scattered through which were plates, rounded nodules and irregular jagged masses which, when decalcified, proved to be dense laminæ of bone, with their included bone cells. These bone cells were not so numerous as in normal bone, while the lamellæ were irregular in their arrangement, though showing a general tendency to lie parallel to frequent openings in the bony tissue. These openings were larger in shape than the Haversian canals, of normal compact bone, and were filled with a connective-tissue stroma supporting the blood-vessels.

The softer parts of the tumor were found to be composed of involuntary muscle fibers arranged in groups and bundles, which were supported by loose connective tissue. Dense masses of fibrous tissue occurred throughout the tumor independently of the muscular tissue.

This microscopic examination of the tumor verified the diagnosis made macroscopically, osteo-fibromyoma.

The recovery was long and tedious, but the patient has now for some time been able to perform her lighter domestic duties.

407 East Grace Street.

*Examination of Tumor of the Uterus.*

BY DR. WILLIAM H. WELCH,  
Johns Hopkins Hospital, Baltimore.

Sections from the different pieces which were sent show a variety of tissues.

1. *Smooth Muscle*.—This is present in considerable amount, although not predominating in these pieces. It occurs especially around masses of bone, and around areas of soft connective tissues; in places, making a kind of capsule for these structures. It is, as usual, in irregular interlacing bundles, and is the seat of considerable hyaline degeneration.

2. *Bone*.—True bone is present, showing bone corpuscles, with canaliculi, typical basement substance, lamellæ and Haversian canals, with marrow substance. The lamellæ are arranged around the marrow spaces with more or less regularity. Some of the bone seems to be formed by a direct metamorphosis of connective tissue, and is, therefore, so-called osteoid. But there are places which show osteoblasts, forming bone in the usual way.

The tissue within the narrow spaces varies. It is well supplied with blood-vessels. In some places it is dense, fibrous tissue, in others more delicate tissue, and in the latter case may contain large numbers of lymphoid cells. Particularly abundant in the marrow are large cells, filled with granules, which may be fine droplets of fat. Adipose-tissue cells occur, but are few.

3. *Embryonic Types of Connective Tissue*.—There are large areas, in some pieces composing most of the tissue, of a delicately fibrillated tissue, very rich in cells. These cells are predominantly young connective-tissue cells, but there are also lymphoid and plasma cells, and eosinophiles. Rim-walled blood-vessels are fairly abundant. This embryonic tissue is apparently of soft consistence. In addition, in connection with this tissue, and also independently, are areas of soft mucoid tissue, with large, elongated and branching connective-tissue cells. In one set of sections this embryonic tissue occupies all except a narrow, peripheral rim, which is composed of smooth muscle. There are hyalin and necrotic changes in these tissues.



4. *Ordinary Adult Fibrous Tissue*.—This is present in connection with the bone and other tissues.

5. *Degenerations*.—There are extensive areas of degeneration: (a) Calcification both of muscle and hyaline connective tissue, (b) hyaline and necrotic changes have affected considerable areas, (c) actual disintegration of the necrotic areas, with fatty metamorphosis and deposit of cholesterolin crystals.

*Diagnosis*.—Histologically, Dr. Randolph's designation of the tumor as *osteo-fibromyoma* is unobjectionable.

*Remarks*.—The tumor must, I think, be referred to embryonic remnants, and there is no objection to considering it as a teratoid formation, although not a very complex one. Besides the bone and smooth muscle, there is a great deal of peculiar embryonic connective tissue in the growth, partly mucoid in character, and partly more cellular, and this tissue is quite unlike any found in ordinary myomatous tumors.

#### DISCUSSION.

Dr. HOWARD A. KELLY of Baltimore, Md.: Mr. President—The specimen is an interesting one, and in view of the rarity of these tumors I wish the essayist had gone more elaborately into the microscopical study and presented some convincing drawings. I should also be loathe to accept any diagnosis made over twenty years ago, when the difference between calcified tumors and teratomata was not clearly understood.

Stony tumors, like that Dr. Johnston has presented, bring up as a matter of general interest the question as to the relative frequency of other dense tumors of the uterus in general. I have looked over the histories of my myomectomies and hysteromyomectomies, and I find that in 561 cases I had 27 cases of calcified myomata—about five per cent.

Dr. J. WESLEY BOVEE of Washington, D. C.: I have had three cases of osteo-fibromyoma of the uterus, in one of which the tumor was removed through the vagina. It was of the sub-mucous variety of fibroid. The tumor so pressed down through the cervix that it required only a slight slitting to get it out, and around the base of it there was considerable bony structure in the body of the uterus, near the fundus. It was real bone. There were spiculæ of bone, such as we find inside of the calvarium, to which the tentorium is attached.

I operated on another case of a similar character, within the past few months, in which there were two growths lying posteriorly and

low down in their attachment to the uterus. They were about three inches in diameter. This woman was operated upon because of the great suffering she had. I could not account for the suffering from the size of the growths and their position, but as she had had considerable treatment in the course of a year I decided to do an operation, with the hope of relieving her, and it proved to be successful in that respect. The growths were quite round, almost absolutely spherical. They were hard, there being bony capsules to them all around, which was solid, and required a good deal of pounding with a hard instrument before I could break it. On section the spiculæ ran all the way across the growth, save a few which extended part of the way only.

I do not know anything about the pathological process which goes on in these tumors. Very little is written about it.

Dr. Kelly requested Dr. Johnston to submit the specimen to Dr. William H. Welch of Johns Hopkins University for examination. This was done, and Dr. Welch's finding is incorporated as a part of the report of this case.

---

## A CASE OF NATURAL URETERO-INTESTINAL ANASTOMOSIS.

BY C. A. KIRKLEY, M.D., TOLEDO, O.

Mrs. W. came under observation in October, 1897, aged thirty years, weight about 160 pounds, never pregnant. Her appearance was of one in perfect health. She was kindly referred to me by Dr. Belt, of Kenton, O. Abdomen was not enlarged, parietal walls thick, no fluctuation. The uterus was enlarged, tender, and quite immovable, being restrained by a mass on the left side, apparently as large as an orange. The mass was hard, crowded the uterus to the right side of the pelvic cavity, and could be indistinctly separated from it. The urinary organs were normal, and from two to three pints of normal urine were secreted within twenty-four hours. Aside from occasional attacks of diarrhœa the digestive organs were in good condition. During these attacks flatulence was a troublesome symptom. Pulse rate, 80. Temperature, 99. Menstruation had been regular, lasting about a week, quite profuse, and very painful. Patient had been treated only for recurrent peritonitis and menorrhagia.

The diagnosis made at this time was that the enlargement of the uterus was due to myomatous degeneration, complicated by disease

of the uterine appendages, suppurative on the left side. Prognosis favorable.

Abdominal section was performed on October 26, 1897. The contents of the pelvic cavity were a mass of adhesive inflammation. Pus in abundance was contained in both tubes and right ovary. The left ovary contained about a pint of serum and pus. Profuse hæmorrhage seriously complicated the operation, and was produced where even the slightest injury was inflicted. The patient was evidently of the hæmorrhagic diathesis. The abdominal incision bled profusely. Aside from the hæmorrhage the operation was no more difficult than is usual in such cases. The uterus was not as large as it had appeared before the operation, and, on account of the hæmorrhagic condition, and in the hope that its size would diminish from removal of the appendages, it was not removed. The abdomen was thoroughly washed out, and after hæmorrhage had ceased the incision was closed, with a glass drainage-tube inserted.

When put to bed the pulse-rate was 94; temperature, 97.6, which gradually rose to normal. At 10 P.M., ten hours after the operation, pulse, 130; temperature, 98.8. From half a dram to a dram and a half of bloody serum was withdrawn from the tube every five, ten, fifteen, or twenty minutes, or at longer intervals when possible. At the end of twenty-four hours, the serum having lost its bloody tinge, the drainage-tube was removed. Pulse, 120; temperature, 99.8. Patient had been catheterized three times, and had voided urine once. Quantity passed, twenty-six ounces. At the end of forty-eight hours the pulse was 118, and temperature, 101, and during the last twenty-four hours patient had passed urine five times, thirty-two ounces in quantity. On the third day an enæma was given, with good results, and much gas expelled. On the morning of the fourth day the pulse was 120, and temperature, 102.6, following a slight chilliness. On examination, slight suppuration was found in the track of the drainage-tube. A stitch above and below this point was removed, the united surfaces of the incision separated sufficiently to establish free drainage, the cavity thoroughly washed out, and gauze drainage applied. During the progress of the case free drainage was kept up, and the pelvic cavity washed out once or twice a day. A more extensive suppuration could hardly be imagined. The entire pelvic cavity seemed to be a pyogenic surface. It would seem incredible that such quantities of pus could be secreted. On the fifteenth day after the operation, fæcal matter appeared in the discharge through the abdominal opening, and on the twenty-second day, urine. Here was a case of both urinary and fæcal

fistula, with a common outlet, a most interesting (?) and at the same time a most deplorable condition! Owing to the hæmorrhagic diathesis, the enormous quantity of pus, and the condition of the patient, operative procedure to close the fistula could hardly be thought of, and after consultation with my friend, Dr. Carstens, of Detroit, it was concluded to rely upon Nature for a spontaneous cure, and continue as already begun, to keep up free drainage, and to keep the pelvic cavity as clean as possible by thorough washing out as often as necessary. The general condition, of course, was not lost sight of. Both urine and fæces continued to escape through the fistulous opening for about two weeks, when urine ceased, and soon after fæcal matter. At the end of twelve weeks from the time of the operation the fistulous opening had entirely closed. After urine ceased to escape through the fistulous opening it passed per rectum. During these weeks the patient urinated from four to six times within the twenty-four hours, and from two to four ounces at one time. Pus was never found in the urine from the bladder.

In November, 1900, the patient was again seen in consultation with my friend Dr. Belt. Her menstruation had been regular, rather profuse, and somewhat painful since the operation. The last two or three menstrual times there had been hæmorrhage and increased pain. Urine had passed per rectum ever since the operation. The general health had been good, bowels regular, except usually a loose evacuation when with the urine. The uterus was freely movable, had rather increased in size, and was extremely tender to the touch. For the last three or four months there had been considerable leucorrhœa, at times purulent. The uterus was thoroughly curetted and cauterized. A large quantity of glandular tissue was removed. Much relief was had from the curettage, though she has had one hæmorrhage since. This was not very severe, but quite prolonged. Had hysterectomy been practicable at first, it would have been far better for the patient, and it may yet have to be done, but as long as the patient can be comfortable, and with only the inconvenience of passing urine per rectum, the attendant complications, and the unknown intra-abdominal conditions, makes that operation rather an uninviting one.

Strict antiseptic precautions were taken at the time of the abdominal section. What had formerly been tubes and ovaries were removed close to the uterine body; hæmorrhage had ceased, there was no sign of injury to the bowel or ureter; indeed, everything was left in a perfectly satisfactory condition. It seems impossible that infection could have occurred at the time of the operation, with the enforced



precautions and perfect surroundings, and, while strict precautions were taken in emptying the drainage-tube, and, though the syringe was sterilized each time, and constantly kept in sterile carbolyzed water, still the drainage-tube was the most probable source of infection. Had the intestine or ureter been injured at the time of the operation trouble surely would have arisen sooner; therefore, the extensive suppuration must have involved the intestine and ureter, probably entirely destroying the ureter at that point. May not the intestines have been the source of infection? A fecal fistula must have formed, into which emptied the divided or destroyed end of the ureter, either directly or through another fistula. May not the kidney be much safer from infection in this way, than if the ureter were directly implanted into the intestine? It would seem that Nature has attempted to teach us in this case the possibility of indirect anastomosis, with the intestine through an artificially constructed fistula. Were that possible, direct infection from the intestine would be entirely overcome.

---

## THE TREATMENT OF CANCER OF THE UTERUS.\*

By J. WESLEY BOVÉE, M.D., WASHINGTON, D. C.

In this paper I have purposely avoided consideration of the causes of cancer of the uterus. As the prophylactic treatment of this disease bears a very close relation to its ætiology, it, also, is not considered. It is merely desired to contrast the various plans of treating the disease after it is discovered and to especially call attention to the advanced surgery of it.

That cancer is increasing beyond the proportion of increase of population of the civilized countries of the world is not to be doubted. Great Britain, France and the United States have sounded the alarm in this direction. And now the official statistics tabulated by Dr. U. Quensul, of Stockholm (*Jour. Am. Med. Assoc.*, p. 521, Feb. 2, 1901) shows the mortality from carcinoma has risen from 8 to 9.75 per 10,000 during the four-year periods from 1875-9 to 1895-9, respective. During the first-mentioned period the carcinoma mortality represented 3.57 per cent. of the total number of deaths, and during the last, 6.27 per cent.

\* Read at a meeting of the Medical Society of the District of Columbia, March 13, 1901.

Cancer affords a striking instance of the application to an almost incurable disease of a multiplicity of remedies, nearly all of which were heralded as cures. During the past two decades we have had the anilines, chelidonium, arsenious acid, carbolic acid, anhydrous sulphide of zinc, bromide of arsenic, Chian turpentine, chromic acid, oil of phosphorus, arseniate of soda, bichloride of mercury, condurango acetic acid, and a host of others, all being highly recommended and employed by local application or injection. All have dismally failed in the treatment of cancer of the uterus. Electricity has been employed in various ways. The different currents have been passed through the diseased structures in all directions and, by its being an unseen and mysterious agent, applied to a condition as little understood, produced hopes. Its use in this manner has proven useless. Its cataphoric property as a carrier and disseminator of various drugs is now receiving the attention of a few enthusiastic workers. Thus far it has not proven of sufficient value to quicken the hopes of the impassioned observer. Byrne, Apostoli and Parsons have reported excellent results in the treatment of incurable cases of cancer of the uterus, and their work is such as to warrant the commendation of the medical world. In the form of the X-ray, a method the usefulness of which is rapidly being developed in many directions, may yet prove to be the panacea so long sought. Certainly the reports of its application to cancer on the surface of the body, by Dr. Wallace Johnson of this city, is so promising that its application to the cervix uteri through a proper speculum may be soon employed, and, perhaps, with good results. We can only wait with suspense the results of such treatment. We are prepared by the failure of other remedies to discard this one, but hope springs eternal. Certainly no harm is likely to come from its use in cases not amenable to radical surgery from any reason. Nearly any remedy is justifiable under such conditions. Cases of spontaneous cure, even, have been reported.

*Treatment of Incurable Cases.*—By incurable cases is meant those in which the disease has invaded structures the removal of which would certainly cause death. When the disease has spread beyond the uterus into various ligaments and chains of lymphatic glands located along Poupart's ligament, near the kidney and along the aorta, the application of radical remedies are no longer applicable. The disease is no longer possible of cure. The question of appropriate treatment still presents itself. The advisability of surgical intervention in cancer of the uterus, subsequent to the radical operation stage, is not shared by all working in this field.

Many think any surgical operation at this time acts as an irritant, stimulating and enhancing the ravages of the disease. Pryor is so convinced of this that he advises, even in the early cases in which radical operation can be done, curettage for diagnostic purposes must not precede the radical procedure by more than two weeks. I must confess a lack of enthusiastic support to the plan of surgical treatment in late cases. Owing to both failures and successes, it is very difficult to formulate rules for our guidance. It is impossible to prove those cases in which the progress of the disease did not appear to be temporarily checked by, and those in which the rapidity seemed enhanced, following a curettage and the application of a cautery would not have been just as rapid if left untreated. Nor in those apparently benefited by the operation can we prove such salutary effect from it. We do know, however, that vaginal hysterectomy has been followed for years with no reappearance of the disease in cases thought to be incurable. These cases, however, are not supported by careful microscopical examination of the removed specimens. Hence, the main argument is upon the diagnosis.

But the apparent freedom from distressing symptoms and condition incident to the late stages of cancer of the uterus are so markedly relieved by a vaginal hysterectomy that its employment is here of value, especially in cases but recently past the borderline. This is an operation with a very small mortality, and is usually of great service. I find in my work the operation has been done thirty-three times for cancer of the uterus, with no deaths connected with the operation. The patient is comparatively comfortable during recovery from the operation, has a considerable respite from the usual suffering from the disease, and, in many cases, is practically cured of the disease. Removal of the appendages at the same time is usually advisable. Should this be difficult or in any wise jeopardize the immediate recovery of the patient they had best be left, as the operation is for temporary relief, and the life of the patient should not be greatly risked in such circumstances.

In a very large proportion of the cases of cancer of the uterus coming to the operator the only question is as to the advisability of the use of the curette and cautery. Unquestionably in many of these we should not employ them, as the disease may have caused craters in the broad ligaments or markedly involved the wall of the bladder, or of the rectum, or even the peritonæum. In such conditions a fistula, connecting the vagina with bowel or bladder, is likely to be caused by the operation, and if the peritonæum is entered an additional serious danger is added to the already deprecable conditions. Should the

broken down or friable tissue be still limited to the uterus, or hæmorrhage be frequent or considerable, then these agents should be employed. Pent-up fluids and débris in the uterine cavity must be removed and the cavity drained. We can hope for little when the bladder is also involved. Despite the work of Chalot and Martin, in removing the bladder with the uterus and grafting the ureters into the bowel, we insist on this belief. Should no discharges or hæmorrhages be noticeable, then no operation should be done. In these very bad cases it is probable the operation of ligation of the ovarian and internal iliac arteries on both sides to starve the growth will be of greater service. Jonnesco and Tuffier are quite partial to this operation.

The work of Dr. John Byrne, of Brooklyn, and Apostoli and Parsons has not received the attention of the profession it merits. From reports of Byrne, the results he has secured by the application of the electro-cautery in these incurable cases is the best known. I am sure the professional acquaintances of Byrne will not accuse him of dishonesty in statistics. He has followed this plan of treatment many years, and is probably more skilful and thorough in it than the rest of us. When the flow of urine through either ureter is obstructed by carcinomatous infiltration some surgeons have transplanted the ureter to the skin, or otherwise disposed of it. In such condition I would suggest the production of the most complete non-surgical euthanasia instead. Such operation would be more or less tedious, unusually severe upon the patient's undermined state of health, and, at best, of benefit for but a short time. Its greatest success would be but to change the mode of death of the patient. For pain in these incurable cases morphia is the remedy, and the dosage should be governed almost entirely by freedom from pain. Whenever possible it is advisable to allow the patient to die in ignorance of the nature of the disease.

*Treatment of Early Cases.*—That a marked difference in progress characterizes different cases of cancer of the uterus is well known. Some end in death in a few months, while others may live a number of years. I have in my care at present a woman in quite good health, who had a crater in a carcinomatous cervix and involvement of the broad ligaments, in the spring of 1897. I advised occasional alum solution douches for slight hæmorrhages, and nothing more radical has been done. On account of this difference of rapidity of extension, which is not due entirely to variety and location, we can never feel certain any case is curable by the most radical operation. According to Ries (*Chicago Med. Recorder*, IX., 284-9, 1895), Selig found, in circumscribed cancer of the cervix, microscopically, small, carcinoma-



tous emboli in the lymphatics of the body of the uterus; carcinomatous nests were found in the broad ligament by Mackenrodt, in the ovary by Reichel, and in the Fallopian tube by Ries. Winter found in one case the glands at the iliac bifurcation involved, while otherwise the disease was limited to the cervix. Wertheim (*Wien. klin. Woch.*, Nov. 29, 1900, quoted by *Med. Rev. of Rev.*, VII., 18, 1901), of thirty-three cases operated, found in eleven of them some of the glands in the region were invaded by carcinoma, including five in which the neoplasm had been supposed to be in its earliest stage. In twenty-six cases of operable cancer of the cervix, the glands were found involved in 20 per cent. In one case, a commenced cancrroid of the portio, a cancerous gland about the size of a cherry was found close to the right iliac vein. No traces of cancer could be discovered in any of the other glands or in the parametrium. In another case a circumscribed nodule on the posterior lip of the cervix was accompanied by a cancerous gland, the size of a hen's egg, on the left external iliac vein. In a third case the cervix was entirely cancerous and a cancerous gland was found close to the uterine vein. In a fourth, the cervix was cancerous, and the parametrium and neighboring glands were normal, but at the point where the left ureter crosses the common iliac a cancerous gland the size of a cherry was found. In a fifth, a narrow strip of cancerous tissue in the right parametrium led to a very large cancerous gland adherent to the external iliac vein. Cancerous nests and fibers were found several times in the parametrium when, to the eye and touch, it seemed perfectly normal. No cancerous changes were found in normal sized glands.

These observations serve to demonstrate how far from reliable is even the most radical operation for cancer of the uterus, and still better how little is to be expected of vaginal hysterectomy, as usually done, and slighter operations for this disease. I cannot bring myself to wholly condemn vaginal mysterectomy for cancer of the uterus, as, indeed, an operation quite radical can be done by this route. The uterine artery should be sought and tied near its origin, and the ureter isolated for at least two inches from the bladder. The broad ligament may then be quite completely removed. This permits exploration up to the iliac vessels in most subjects. When conditions exist interdicting long operation, when excessive fat renders more difficult the abdominal route, and when we have reason to doubt the probability of eradication, the broad vaginal operation is yet applicable. The plan I have been accustomed to follow is to first cover over the cervix, with or without curettage, after which the ureter is located,

separated for some distance, and a traction suture placed about it for purposes of ready identification, and then tracing outward the uterine artery. This vessel is ligated near its origin, and when this is completed on both sides the broad ligament is separated as well as possible at the outer end. This dissection is carried up to the ovarian arteries as rapidly as possible, and these vessels secured, as far as possible, outside the appendage. The uterosacral and round ligaments are severed in the meantime, but not so much of them can be removed as by the abdominal route. Nor can the region of the iliac bifurcation be as well investigated.

In early cases of cancer of the uterus is radical operation justifiable? This is a question that cannot be as effectually answered at this time as ten years hence, for the particular reason that typical operation for this condition is of but five years of existence, and has not been thus far adopted by pelvic and abdominal surgeons generally. We do know the mortality of cancer of the uterus, when allowed to proceed, is about 100 per cent. Pryor found the mortality rate of the radical operation in ninety-eight cases done by Ries, Werder, Polk, Russell, Clark, and himself was 11 per cent. To these I may add two more successful cases by Pryor, two successful by Ries; Wertheim, twenty-five cases, with three deaths, and fifteen by myself, with one death, and have a total of 142 operations, with a mortality-rate from operation of 10 per cent. It is not unlikely that with a wider acquaintance with the radical abdominal enucleation the primary mortality-rate will be considerably lessened. Five per cent. is not an oversanguine estimate of what it will be five years hence. If the operation is of material benefit to these unfortunate patients, then its mortality-rate will afford but a weak contraindication to its employment. Of this, nothing definite can be stated more than that already, in its five years of existence, its curative tendency is superior to that of any other surgical procedure in the treatment of cancer of the uterus. Ries writes me all his cases operated by this method are free from recurrences, the oldest one nearly four years. In my cases, fifteen in number, there were two recurrences, in both of which were found unexpected broad ligament involvement at operation, and the operation was not as radical as I am now doing. As my first operation was done so late as March 31, 1898, the series is of little value in the light of ultimate results.

In the second, done April 2, 1898, and in which a cancerous mass about the left ureter, already causing hydro-ureter, necessitated resection of, and trassplantation of, this duct into a new place in the bladder,

the woman is in splendid flesh, with no evidence of return of the disease. These results are better than might be expected, and are sufficient to justify the operation in early cancer of the uterus. I am making no distinction between the different varieties of cancer and its different locations in the uterus, as the comparative infrequency of cancer of the body fully counterbalances its most successful eradication. Therefore, for practical consideration we might as well consider only cancer of the cervix. The radical operation of to-day certainly has a sound and practical foundation. It is based upon careful research into the conditions of the tissues about the uterus during the presence of cancer in that organ. This can only be done by careful aid of the microscope, as shown by Selig, Mackenrodt, Reichel, and Ries. If their researches are reliable, and no one can doubt that, then in thorough removal of all structures frequently found invaded is the sole hope of eradication. The two great reasons for less radical abdominal operation have been hæmorrhage and fear of injuries to ureters and bladder, both of which will be considered in connection with the various operations devised for the removal of the pelvic structures subject to carcinomatous invasion from the uterus.

The various radical methods devised are known as the Ries-Rumpf-Clark, the Werder, the Pryor, the Chalot, and the Wertheim operations. The credit of this line of procedure is probably due to Emil Ries, of Chicago, who carefully studied cancer of the uterus, with invasion of surrounding structures, and planned the operation which was practiced by Rumpf, of Berlin, for the first time, early in 1895. It was the first of its kind. Shortly after, in the same year, J. G. Clark devised an operation, and Kelly employed it.

Ries' operation has the following stages:

1. *When the portio is involved*, curette and cauterize away the diseased cervix, thoroughly cauterizing the bleeding surface. By means of flaps cut from the vaginal wall and sutured together, isolate the diseased surfaces. *If the cervix or the body is involved*, the cavity of the uterus should be curetted, irrigated, and packed with iodoform gauze. It is to be closed by suturing at the external os. The vagina is packed with iodoform gauze.

2. Place the patient in Trendelenburg's position and open the abdomen. Remove the uterus, ovaries, tubes, and broad ligaments, as described by Freund, in 1878, or slightly modified by Mackenrodt.

3. Beginning at the iliac bifurcation the peritoneum is opened along the posterior wall of the pelvis, and the glands, with surrounding tissue, dug out with the fingers.

4. Close all peritonæal openings with sutures, and then the abdominal wall.

The first operation by the Clark method (*Johns Hopkins Hosp. Bull.*, V., 120, 1895) was done April, 1895, and the glands at the iliac junction were not removed. In the February-March, 1896, number of the *Bulletin*, the various steps of this operation are given as follows:

(1) Under cocaine anæsthesia insert bougies into the ureters. (2) Place patient in Trendelenburg's posture and open the abdomen. (3) Ligate the upper portion of the broad ligament, with the ovarian artery, divide vesico-uterine peritonæum around to the opposite side, and push the bladder off. Spread the layers of the broad ligament apart, exposing the uterine artery. (4) Dissect the uterine artery out for  $2\frac{1}{2}$  centimeters from the uterus beyond its vaginal branch, and tie. (5) Dissect the ureter free in the base of the broad ligament. (6) Ligate the remainder of the broad ligament close to the iliac veins and cut it away from its pelvic attachments. (7) Carry the dissection well down below the carcinomatous area, even though the cervix alone seems involved. (8) Treat the opposite side similarly. (9) Perforate the vagina with sharp scissors, making strong traction on the uterus. Then ligate in small segments (1 cm.), and cut each segment as tied. (10) Pack with iodoform gauze from above. (11) Irrigate the pelvic cavity, and close the abdomen.

It will be noted the Clark operation does not include removal of the glands at the iliac bifurcation, even in 1896, which is one essential difference between it and the Ries operation. It does include catheterization of the ureters as a preliminary step, and in the Johns Hopkins Hospital work a case subsequently died from a piece of a bougie 17 cm. long being left in a ureter.

Werder's operation is thus described by him (*Am. Jour. Obstet.*, XXXVII., 289-293, 1898): (1) Preliminary curettage and thermocauterization. (2) Opening the abdomen, and the use of the Trendelenburg position. (3) Securing ovarian arteries. Separating bladder from the uterus and broad ligaments; the uterine arteries are tied near the wall of the pelvis. An assistant inserts two fingers in the vagina as a guide, and the bladder is dissected from the vagina to within an inch of the vulva. The sacro-uterine ligaments are divided with scissors, and the rectum separated from Douglas' pouch and dissected with two fingers, extended down to the lower half of the vagina. The lateral walls of the vagina are now freed from attachments, and the base of the broad ligaments separated. (4) The uterus and vagina are pushed down into the pelvic outlet, and the



bladder peritonæum drawn across the pelvic cavity and stitched over the rectum to the posterior wall of the pelvis. (5) The abdomen is closed. (6) The patient is changed to the lithotomy position, the uterus seized with volsella forceps and, with the inverted vagina, drawn out the vulva. With a finger in the rectum and a sound in the bladder, the inverted vagina is amputated with the thermocautery. (7) The cavity is lightly packed with gauze.

He devised this operation to remove the uterus as in ordinary hysterectomy, except to do more work about the cervix and fornices of the vagina. Like Clark, he did nothing to the pelvic glands near the iliacs nor to the ureters, except by pulling the bladder forward he hoped to push the ureters far enough to the side to get them out of the line of danger. He suggests, however, the opportunity to get at the iliac glands is offered if thought to be advisable. Pryor's operation, as described by him (*Am. J. Obstet.*, XXXIII., 801-817, 1896) consists essentially of preliminary ligation of the ovarian and internal iliac arteries and thorough removal of the pelvic glands. It is the most radical, and should give the best results, particularly as the blood loss is practically *nil*. He suggests following down the ureters to the bladder, and thorough removal of the glandular and immediately surrounding structures.

Chalot's operation (*Independ. Med.*, Paris, II., 297, 1896) is nearly similar. He, however, removed the involved bladder as well, and transplanted the ureters into the rectum and onto the surface of the body. Martin, of Chicago, has done a few cases of this kind in nearly the same manner. It has been suggested that ligation of both internal iliacs would cause sloughing of the pelvic structures, but this has not been reported in any case thus far. Polk ligates the anterior branch of the iliac. Were this division constant or subject to even few variations, this operation would be far preferable. But it is known to be a very unreliable artery, and, therefore, the internal iliac itself is preferred.

Wertheim exposes and liberates the iliac blood vessels and ureters, and carefully searches for and removes the glands along them up to the division of the aorta. The parametrium and paravaginal cellular tissue are extirpated with the uterus and the upper portion of the vagina.

In the operations devised by Ries, Clark, Werder and Chalot, the removal of the parametrium and paravaginal cellular tissue has not been a feature, though Werder did remove a large portion of the vagina. But he pushes aside the portion of the broad ligament outside the

ureter, and leaves it. Clark ligates the broad ligament, which necessarily requires leaving more of it than when it is carefully dissected away. The operation done by Chalot I cannot endorse, for when the disease has begun in the uterus, and has been progressing sufficiently long to invade the bladder to the extent of requiring its removal, the condition would seem absolutely hopeless. Even were it not so, the percentage of deaths from subsequent infection following ureteral transplantation to the skin and bowel is so great as to cause the utmost anxiety on the part of the surgeon whenever he is confronted by the necessity for such procedure.

The operations of Pryor and Wertheim are by far the most radical, and should give the best results, provided the disease has not passed beyond the lateral walls of the pelvis or the iliac vessels. Even more careful dissection will be required if any glands in the region of the rectum or near the kidney are involved. Should the disease pass along the round ligaments, as I have seen in a few cases, the condition is absolutely hopeless.

The plan I have followed is thus: (1) Vaginal douche of corrosive sublimate solution, 1-2,000, followed by a loose packing of the vagina with bichloride gauze. This is done by a nurse before anæsthesia. (2) Abdominal incision, and placing patient in Trendelenburg position. (3) Ligation of the ovarian vessels at the wall of the pelvis, and securing them at uterine cornua with forceps or ligatures. (4) Separation of bladder from uterus and broad ligaments. (5) Partial dissection of the ureter from the iliac artery to bladder, and placing two silk loops around each as guides, ligating and severing the round ligaments at the pelvic wall; splitting the broad ligament, and ligating the uterine vessels close to the origin of the uterine artery; dividing broad ligaments at the outer ends; cutting away the utero-sacral ligaments close to the pelvis, and continuing the dissection down outside the vagina near to the vulva. The glands and fat are dissected out from all exposed denuded surfaces up to the iliac junction and down to the bottom of the dissection, as well as along the lateral margins and slightly posterior to the rectum. (6) Push all loosened structures down into or through the vulva, and pack above with sterile gauze. Over this gauze suture peritonæal covering of bladder to rectum and posterior margins of peritonæum. Close abdominal incision (7) Place the patient in the lithotomy position and, grasping the cervix uteri with a volsella forceps, pull out the loosened structures and, by a circular incision through the vaginal wall, meet the edge of the dissection from above. The end of the gauze packed in from above is

pulled into the vulvar opening for easy withdrawal about the fifth day.

This operation is a combination of those of Werder, Ries, and Pryor, with a few modifications one will, from time to time, make in surgical work. The dissection of the glands at the junction of the iliac arteries was recommended by Ries, and in other places by Pryor. Pryor also recommended isolation of the ureter from the iliac, crossing to the bladder, and separation of the vagina by dissection through the abdomen was a strong feature of Werder's operation. Ligation of the uterine arteries near their origin, it is believed, was first done by Kelly. Following this plan I have operated fifteen times since March, 1898, with one death and two recurrences. In one of these latter the operation should not have been attempted, as it followed by nearly two months a curettage and cauterization with chloride of zinc. At the time of the preliminary operation the patient was prepared for radical operation, but when she came to the operating table she was taking the anæsthetic badly, and her pulse was feeble, with a rate of 130. The curettage and application of the zinc were done instead. During the next four weeks she ran a septic chart, and had infiltrated broad ligaments and a pelvic mass. This was thought to be independent of the malignant condition, and a radical operation was later done. When the abdomen was opened the uterus, bladder, intestine, appendages, and vermiform appendix were found matted, and both tubes containing pus. Recurrence in the bladder wall and vagina was noted nine months later. It is very probable the irritation incident to the first operation and the septic infection spread the cancerous materials into structures beyond removal, and in that respect support the statement of Pryor, previously mentioned. These operations are devised for early cases, though Pryor advocates ligation of the internal iliacs for other than early cases—not as a curative procedure, but for its retarding influence on irremovable cancer of the uterus and adjacent structures. Some of them, though rational, are not applicable to all cases. The disadvantages are, the length of time required, the very careful dissection and technique needed. Above all is the severe tax it levies on the vitality of the patient. The hæmorrhage is oftentimes controlled only by patience and difficulty.

The location of recurrence of cancer of the uterus after operation is in the vaginal wall in most cases. In one of mine the site of it was about the urethra, and an inch to the side of it. It is more necessary to guard against recurrences in the vaginal wall than nearer the abdominal cavity. When for months a carcinomatous cervix is in contact

with the vaginal wall, or the discharge from a cancerous corpus bathes it for a considerable time, we have just cause to fear contamination. This action has been observed repeatedly, and is liable to occur on any portion of the vaginal wall, being least at the introitus. Such implantation shows the necessity for partial or complete vaginectomy as a part of the radical operation, and in this respect the Werder operation was a marked advance. For abdominal eradication by the Werder or similar operation, the preliminary curetting and cauterization is, in my judgment, not much better than useless, and requires valuable time illy employed. In the radical vaginal operation, even, I am inclined to believe the vagina should first be loosened without injury, beginning at the vulvular junction, and the outer end of this tube carefully closed by suture before the uterus is reached. This would prevent infection, and probably remove the surfaces exposed to implantations of the disease.

As has occurred in radical operations for breast cancer, we can reasonably expect a reduction in the percentage of recurrences in cancer of the uterus from these radical operations. More thorough study into its ætiology may marvelously change the plans. But, with our present knowledge, nothing can be more logical than the radical operation for early uterine cancer.

*1404 H street.*

---



## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

---

## EDITORIAL.

### OVARIAN GRAFTING.

Dr. Robert T. Morris in an interesting article in the *Medical Record* reviews a number of his own cases of ovarian grafting together with a résumé of the literature up to date. His first notes upon cases treated in this manner appeared in 1895 and it would seem that to him belongs the credit of the idea, subsequently developed by others at considerable length, particularly in experiments upon animals. The two facts that led to the writer's own experiments were the continuance of function displayed by thyroid glands grafted upon cases of thyroidectomy and the occurrence of menstruation and even pregnancy in cases of double ovariectomy; the reason for the latter he thinks is explained by a case in which he had occasion to open the abdomen some months after a double pyosalpinx operation and found that a small portion of the ovary, distal to the ligature and of course deprived of its original circulation by way of the broad ligament, had retained its vitality, instead of being absorbed as is usually supposed in such cases. It therefore occurred to him that a piece of ovary might be deliberately transplanted with as good results as when accidentally done; that thus the meno-

pause might be averted and pregnancy become a possibility; also that such experiments if successful would afford an argument against the removal of supposedly useless uteri in cases whose adnexa had been extirpated.

His first case was a woman, two years married but never pregnant, from whom both tubes and ovaries were removed for septic trouble of long standing. A small piece of one ovary was transferred to the interior of the stump of the right oviduct. This patient became pregnant soon after leaving the hospital but aborted at three months, probably on account of persistent adhesions; she continued to menstruate for about four years. The second case was a girl of twenty years with infantile uterus and rudimentary adnexa, who had never menstruated. A portion of ovary from a woman thirty years old was grafted into the fundus of her uterus. Beginning eight weeks later she has continued to menstruate with some irregularity but in a fairly normal way, has improved much in personal appearance and is relieved of the symptoms of suppressed menstruation from which she formerly suffered. In the interests of science, no effort should be spared to induce this young woman to marry.

Of the writer's remaining cases, six have been lost sight of too soon to allow conclusions to be formed, though they continued to menstruate so long as they were under observation. Four other cases are reported, though two of these are of recent date. Case III., twenty-two years old, had ovarian cysts removed successively from both sides, and at the second operation a portion of another patient's ovary was grafted into the left broad ligament. She was heard from a year later and during that time had menstruated regularly and easily. Case IV., thirty years old, had suffered from very painful menstruation accompanied by much reflex disturbance. A diagnosis of ovarian sclerosis (afterwards confirmed) was made and both ovaries were removed. With the exception of two months some time later, when she appeared to have a pelvic thrombo-phlebitis, she has menstruated regularly and painlessly, the freedom from pain being due doubtless to the removal of the ovaries but the continuance of menstruation to the grafting operation. Case V., similar to the preceding, had an apparently normal portion of one ovary transferred to the left broad ligament; menstruation was deferred for some months but has now returned and is less painful than formerly. In Case VI. a similar operation was performed; for four years she has menstruated regularly, though sometimes scantily and, while she has some pain due probably to the re-

formation of adhesions, she suffers much less than before. This case is a married woman but has not become pregnant.

The writer now chooses a point of the broad ligament as near as possible to the normal site of the ovary, slitting the ligament and suturing to the raw surface thus formed the raw surface of the ovarian fragment, leaving the latter uncut surface to project into the peritoneal cavity. As untoward results, he mentions the case of supposed thrombo-phlebitis, a case (V.?) in which the patient's own ovary, already degenerate, continued to undergo degeneration, and a third, that was thought to have an extra-uterine pregnancy but disappeared from observation. Such a pregnancy is liable to occur unless the oviducts with their fimbriæ be left (as is often possible) intact.

From these cases and from experiments upon animals it is evident that ovarian tissue may be transplanted with continuance of its function and even with the possibility of future pregnancy. Even more interesting is the case of the young woman with undeveloped uterus and adnexa who after the introduction of normal ovarian tissue began to menstruate. As the writer suggests it is important now to learn what would be the effect of ovarian grafting upon patients whose ovaries have been removed some time previously. Doubtless many of these cases might have been spared a premature menopause and its various accompanying disturbances, could ovarian grafting have been done originally. But would the operation, even now, prevent further degeneration or undo such as has already occurred? At all events the experiments are sufficient to show the possibilities of work along these lines and, as the author insists, constitute a reasonable argument for leaving the uterus whenever possible. Should some of these experiments result in pregnancy we should fancy certain not uninteresting medico-legal questions might arise but we suppose this is one of the objections that Dr. Morris classifies as "fanciful"; and when at last a real baby is produced from such a dual league it will be time enough to decide whether the infant belongs to the woman whose tissues, though cast upon a foreign shore, really sent it forth or to the woman whose uterus took the wanderer in and harbored it for nine weary months; and whether the second woman would be justified in a suit to recover rental; or, failing in that, in evicting the tenant before the lease should have expired.

A. D. C.

---

## REVIEW.

Infant Feeding in Its Relation to Health and Disease. By LOUIS FISCHER, M.D. F. A. Davis Co., Philadelphia, Chicago.

This book begins with a split infinitive and after a devious course of some 359 printed pages closes with some bland leaves, not its least valuable portion. It aims to give a comprehensive discussion of the various methods of infant feeding and of the conditions and requirements, both in health and in disease, to be considered in approaching this problem. The opening chapters upon the anatomy and physiology of the infant stomach, digestive processes, chemistry and bacteriology of milk, etc., are decidedly unsatisfactory, being too brief in some matters and too long in others, and exhibiting a marked lack of clearness in style and arrangement. Although detailed directions are given for securing a suitable specimen of breast milk for chemical analysis, very little is said about the analysis itself; it would have been well in this matter to describe such approximate methods as are open to the general practitioner, who may not be always able to call a chemist to his aid. The following chapters upon breast nursing, the various ways of preparing cow's milk, sterilization, etc., are much better as is also the second part of the book, which deals with infant foods and methods of feeding in special cases and discusses some other common affections of infancy dependent upon improper feeding or amenable to changes in diet. That most of the many methods of home modification of milk, invented by physicians desirous of taking degrees as Doctors of Pædiatry, should have been omitted is well. Several simple plans are given but, of the somewhat complicated ones, only Coit's decimal system is described. The writer's results from the Walker-Gordon milk have been, for the most part, rather unsatisfactory but he thinks highly of the Gaertner mother-milk. In general, it may be said that the book contains a good deal of valuable matter, personal experiences and helpful suggestions but exhibited in a style and diction that are at times almost unintelligible, at other times merely shocking and embarrassed throughout by an unfortunate lack of sequence and arrangement.

A Text-Book on Practical Obstetrics. By EGBERT H. GRANDIN, M.D., with the collaboration of GEORGE W. JARMAN, M.D. Third edition, revised and enlarged. Illustrated with 52 full-page photo-



graphic plates and 105 illustrations in the text.  $6\frac{1}{2} \times 9\frac{1}{2}$  inches. Pages xvi-511. F. A. Davis Company, publishers, Philadelphia.

Notwithstanding the recent appearance of a number of new and, for the most part, excellent text-books on obstetrics this one seems to retain its popularity, as evinced by the appearance of this, its third, edition. As has been stated before in these columns, on the appearance of the previous editions the work is a valuable one written in the characteristic style of the authors—direct, clear and forcible. The perplexed practitioner, looking for advice upon some worrying obstetrical complication, will not be confronted with a detailed description of all the different procedures that have been resorted to, together with an abundance of statistics and theory, but he will find one method at least—and that in no uncertain tone—that will probably meet the requirements of the case. Its teaching is clinical rather than didactic or theoretical. It is nothing if not practical.

This edition has been enlarged by the addition of a chapter dealing with the anatomy of the female generative organs and with embryology. This chapter, as in keeping with the general character of the book, is as concise as possible and only such data has been inserted as is regarded essential.

Unfortunately not so much can be said for the illustrative work. It is true there are a number of full-page plates but, for the most part, they are neither well selected nor well executed. The advances in this department of the bookmaker's art have been so great within the last few years that the life-like perfection of the colored plates, the accuracy of the drawings, together with the constant improvement in photographic and lithographic work, not only elucidates the text but is almost a clinical demonstration itself; therefore, it is to be regretted that in the edition before us this feature has not been brought up to the standard of the text and it is to be hoped that in future editions this portion of the work will be entirely revised and brought to the standard that we have come to expect in works of this class. P.

Progressive Medicine, Volume IV., 1900. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. 428 pages, 69 illustrations. Lea Brothers & Co., Philadelphia and New York, publishers.

The first portion of this quarter, written by Einhorn, deals with

diseases of the digestive tract and its allied organs. He describes at some length his own gastric douche and powder blower, which appear to be thoroughly practical instruments. Among many short chapters are longer ones upon moulds in the stomach, syphilis of the stomach, pancreatitis and floating liver. William T. Belfield writes upon genito-urinary diseases and syphilis. We note with special interest the paragraphs upon surgical treatment of unilateral nephritis, upon the use of gelatin in renal hæmaturia, upon calculus of the utricle, and upon visceral syphilis. Joseph C. Bloodgood has the department of fractures, etc., and orthopædics; much space is devoted to shock, examination of blood in surgical cases, the hæmostatic value of gelatin, and the subject of salt-water infusions. Chapters upon anæsthesia follow lumbar puncture; also, interesting articles upon gas-bacillus infection, tetanus and its treatment (serum, preventive and general), and multiple gangrene in malarial fever; and long and well-illustrated articles on fracture of the elbow, and upon coxa vara and allied conditions. Arthritis, plain, gonorrhœal and tubercular, the arthropathies of nervous disease, hydrops articulorum and tubercular osteomyelitis receive many pages, and are well illustrated. John Rose Bradford writes of diseases of the kidneys, opening with an interesting discussion of the significance of albuminuria, albumosuria and alkaptonuria; skin eruptions in renal disease, pericardial complications and the action of poisons on the kidney follow. There is a practical chapter upon the treatment of Bright's disease, an interesting one on renal tumors and a discussion of the internal secretion of the kidneys and the nature of uræmia. The division of physiology, by Albert P. Brubaker, is brief; many subjects are noted in condensed but interesting paragraphs, Prof. Loeb's experiments being easily the most remarkable investigations in this line. Henry B. Baker writes of hygiene, at some length, upon toxins, particularly in their relation to neurasthenia; regarding the ways in which infectious disease are spread, Flügge's demonstration of the infectiousness of the spray thrown from the mouth of tubercular subjects in coughing, sneezing, and even in ordinary speaking, are of much significance. The therapeutic referendum by E. Q. Thornton is much enlarged beyond that of last year, and in the present issue is a valuable and interesting chapter, taking up in considerable detail practical experiences with the newer remedies and methods of treatment, as well as new uses for old remedies. Taken as a whole, the volume is an excellent addition to the series.

## TRANSACTIONS OF THE BROOKLYN GYNÆCOLOGICAL SOCIETY.

Stated Meeting, March 1, 1901.

The *President*, JOEL W. HYDE, M.D., in the Chair.

FIG. I.—Fibroid uterus. Inch scale, reduced one-half.

*Fibroid Tumor of the Uterus with Intercurrent Development of Malignant Disease of the Endometrium, with Bilateral Ovarian Multilocular Cyst.*

Dr. L. GRANT BALDWIN: I present the photograph of a specimen which shows three pathological conditions. It was a fibroid tumor of the uterus, with intercurrent development of malignant disease attended with bilateral multilocular cysts. The patient from whom it was taken, Miss R., thirty-two years old, single, a virgin, had always

enjoyed perfect health until five years ago, when she commenced to menstruate too freely. Her menstruation soon became irregular and she bled the greater portion of the time. With this intercurrent hæmorrhage she lost from one pint to a quart of blood at frequent intervals. Fear of an operation caused her to bear her suffering until two weeks ago, when I operated upon her. The diagnosis of multiple fibroma was made, but malignant disease was not discovered prior to operation, although a growth within the uterine cavity and coming well

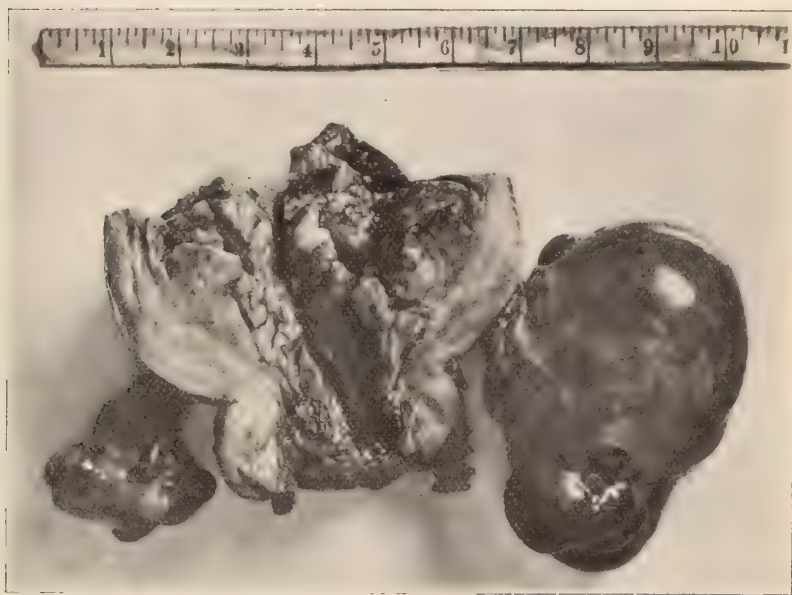


FIG. II.—Fibroid uterus cut open, showing changes in endometrium.  
Inch scale, reduced one-half.

into the external os could be easily felt. A panhysterectomy was performed. Fortunately there were no adhesions, except where the bladder was adherent anteriorly; in separating these adhesions I wounded the bladder, but sewed it up with fine catgut, and no disturbances followed. I present the specimen, particularly, as one of carcinoma of the endometrium, developing along with an ordinary fibroma. In no way do I mean to intimate that it is an example of fibroid becoming a cancer. That, I believe, has been settled as being an impossibility. Fig. 1 shows well the gross appearance of the uncut



specimen. Fig. 2 very perfectly shows the extent of the changes in the endometrium.

#### DISCUSSION.

Dr. GEORGE McNAUGHTON: I should like to ask the doctor in regard to the condition of the heart.

Dr. BALDWIN: There was no organic lesion of the heart, so far as could be made out. She had an anæmic murmur at the base of the heart. She had suffered extremely from the loss of blood; the heart showed the weakness of the general muscular system.

#### *Parotid-Gland Extract in Affections of the Ovary.*

Dr. W. E. BUTLER: I had an interesting case, in which I removed the ovary and tube of one side, and a portion of the ovary on the other. An examination of the patient one month afterward showed that the remaining portion of the ovary had enlarged, and I concluded that there was another cyst present. This kept on enlarging for two or three weeks longer, when she was placed on parotid-gland extract, 5 grains three times a day, with the local application of iodine and ichthyol tampons, hot vaginal douche and rectal irrigations, with the result of decreasing the size of the growth. Whether the parotid gland is causing this effect or not I cannot say. The woman is certainly getting better, but I cannot say what the outcome will be.

#### DISCUSSION.

Dr. CHAS. JEWETT: I should like to ask what was the character of the mass; was it fixed in position, was it an inflammatory product, an exudate, and not a new growth in the ovary?

Dr. BUTLER: I think not, because the mass was movable. The ovary could be moved well up and down. It was not an exudate, but rather a growth in the ovary.

Dr. C. R. HYDE: There is no evidence to show that parotid-gland extract will have any preventive effect upon the formation of retention cysts in the ovary, but it has been demonstrated that the internal exhibition of parotid-gland extract, in conjunction with local treatment, will control an exudate more quickly than anything else. There is no ground for believing that parotid-gland extract produced this effect in the case related by Dr. Butler. I am not sure that it was a cyst; it must have been an exudate.

*Causes of Dysmenorrhœa.*

BY ALBERT M. JUDD, M.D.

(See page 295.)

## DISCUSSION.

Dr. C. R. HYDE: I have collected the statistics of 200 cases, trying to find out why patients had dysmenorrhœa. Dr. Judd's paper shows one thing, that gynæcologists know little about dysmenorrhœa, and that the best we can do is to class it as a symptom, the cause of which we know but little. I have in mind two sets of cases, one in the married and the other in the unmarried. The latter were cases of antelexion, with no other disease present. Of these 26 cases of antelexion, 20 had premenstrual pain, 5 had no pain at all, and 1 had pain only after the flow had ceased. Among the married women who had premenstrual pain, there were 17 cases; 8 of these had tubo-ovarian troubles and the other 8 had retroversion, and 1 had a pelvic tumor. In both of these sets of cases there was premenstrual pain, and yet the lesion was entirely different. It has always been a wonder to me why, at some congress of gynæcologists, no committee had been appointed to investigate and report upon the classification of dysmenorrhœa other than obstructive, neurotic, ovarian, membranous and congestive. As a student I knew every cause of dysmenorrhœa, its classification, and was prepared to tell just what kind of dysmenorrhœa the patients had; but I found, to my sorrow, that clinical medicine differed radically from the theory of text-books. No gynæcologist can make me believe that when he sees a case of dysmenorrhœa for the first time, he can tell just what kind of dysmenorrhœa it is, or reason out the ætiological factor. There is no accepted theory to-day why a woman menstruates. One of the latest theories is that there is a special center of menstruation situated in the lumbar enlargement of the spinal cord. Now, why should we attempt to assign a cause for dysmenorrhœa when we know so little about menstruation itself? Yet the text-books contain the four classifications mentioned, and give the differential diagnosis. There are cases of antelexion in which there is no dysmenorrhœa at all, and we may have bad cases of antelexion in which a sound can be passed easily; there is no obstruction and yet dysmenorrhœa is present. So the obstruction theory of dysmenorrhœa can be thrown out entirely. I do not know of any man to-day who will accept any theory as to the cause of dysmenorrhœa, and for that reason alone it is best to say

that dysmenorrhœa is a symptom, and we should not make any attempt to make any classification that cannot be applied at the bedside.

Dr. GEORGE McNAUGHTON: Several years ago I made a series of investigations which led me to believe in obstructive dysmenorrhœa. Like Dr. Judd, I have found many cases of flexions, accompanied by dysmenorrhœa, in dispensary work, but I cannot classify them, not knowing the percentage of those in which the pain occurred before, during, or after the menstrual flow. A certain number of cases were relieved as soon as the menstrual flow was established. In many cases after the flow was established I found the uterus became almost straight. I am satisfied that there is something in obstructive dysmenorrhœa, and that it is probably due to flexion. The uterine cavity does not hold many drops—eleven or fifteen—and the distention by a few more drops might give rise to considerable pain. I am not willing to give up regarding obstruction as a cause of dysmenorrhœa. Many cases operated upon by dilatation remain well; even sterility is cured by that means.

The cause should, if possible, be ascertained early. Physicians have no right to allow young girls to suffer from dysmenorrhœa, nor should they attempt to relieve them each month without knowing the conditions present. I believe these girls are entitled to a diagnosis, and I believe in making an examination of these cases through the rectum, with the patient under the influence of an anæsthetic.

Dr. CHARLES JEWETT: We must agree, in the main, with the conclusions reached in the paper. I am inclined to think, with Dr. McNaughton, that obstruction cannot wholly be ruled out as a factor in dysmenorrhœa. The expulsion of small blood clots may be attended with labor-like pains, even in the absence of inflammatory lesion. The influence of cervical dilatation and of parturition are in line with this assumption. Dysmenorrhœa is seldom troublesome in the parous woman. Yet the essential factor is hyperæsthesia of the uterus.

The presence of endometritis and of some degree of parenchymatous metritis must usually be assumed. Spasm of the circular muscle fibres at the os internum, no doubt, be a complicating factor, increasing obstruction. Obstruction, too, is increased by the swelling of the congested mucosa. Yet inflammation is the chief cause of the pain. The small amount of flow is not inconsistent with pain, for the pain is not to be referred merely to the internal os, but rather to excessive intra-uterine tension in a hypersensitive uterus. Lesions

of the pelvic peritonæum and of the adnexa can be counted as causes mainly because they lead to lesions of the uterus.

Neurotic, neuritic, gouty, and rheumatic conditions are properly included in the causes of painful menstruation. Examples of the first are common in young girls, whose menstrual pains disappear during the summer vacation at the seaside or in the mountains.

Dr. L. GRANT BALDWIN: With most of the views expressed I am in accord, but I disagree with Dr. Hyde's view that we can never say with what sort of dysmenorrhœa we have to deal. Certainly a well-marked salpingitis, for instance, will be accompanied by pain after the menstrual epoch, and is due to inflammatory conditions of the adnexa. To call it inflammatory dysmenorrhœa would not be right. Considering dysmenorrhœa merely as a symptom of many conditions I believe will make this subject much easier, and we can then certainly arrive at a diagnosis which will satisfy ourselves in many cases.

Dr. J. O. POLAK: If we take cognizance of the relation which the pain bears to the menstrual period it will give us some indication of the site of the trouble. There is no question but that dysmenorrhœa is a symptom of some pathological lesion, either microscopical or macroscopical, which can be found. There are not many cases that have not some lesion as a cause for this symptom. Certainly in cases of ovarian dysmenorrhœa, while we may not find any gross changes in the ovary, yet upon section we will often find sufficient cause for pain in the presence of cirrhosis, microcytes, etc. In regard to obstruction causing dysmenorrhœa, I think the pain is due not so much to the obstruction but the changes resulting from displacement of the uterus, to its increased weight, and to the disturbance in its circulatory apparatus. These cases may be relieved for two or three menstrual periods by the introduction of graduated dilators through the internal os and curettage, yet they relapse promptly inside of six months or a year; they are seldom permanently relieved even after careful and thorough dilatation. I have found a large number of cases of dysmenorrhœa, with fistulæ in ano and troubles at the neck of the bladder and the trigone. There is another point that bears out the statement that the condition is not so much due to obstruction as to the result of pelvic congestion, the result of displacement (if we accept cases of infantile retroposed uteri), and that is, that the bodies of most anteфлекed uteri are found to be thickened as the result of a chronic metritis, which is kept up by passive congestion. It is surprising how firm these corpora are when compared with the body



at the time of puberty. Dr. McNaughton brought out a good point when he referred to patients who are treated with sedatives, without regard to diagnosis. I believe such patients should not be allowed to go along suffering at each menstrual epoch, without a diagnosis being made. A rectal examination is fairly satisfactory for diagnosis, but a vaginal examination, without anæsthesia, is utterly valueless in doubtful cases; we should explain to the girl, or the woman, the necessity of such measure, and try to gain her consent to use an anæsthetic for diagnostic purposes, and establish no treatment except tonics until such diagnosis has been made.

Dr. JOEL W. HYDE: There are cases in which there is a positive uterine cramp, the patients lying with knees drawn up against the abdomen, suffering intensely. There are other cases in which the pain is referred to the ovaries. I had hoped that Dr. Polak would state what benefits he derived from the use of electrical treatment in these cases.

Dr. J. O. POLAK: The treatment of these cases by electrolysis has been remunerative but not curative. Some of these women, belonging to the class of the so-called obstructive dysmenorrhœas, have been given two séances one week before menstruation, and they have passed through the period very comfortably; this must be done each month, a few days before the expected period. This treatment has set up an endometritis many times, when, of course, all intrauterine treatment must be discontinued. I have never seen a permanent cure from the use of electricity.

Dr. O. A. GORDON: I have had some experience with electrolysis in the treatment of dysmenorrhœa, but my experience has not been as discouraging as that of Dr. Polak's. I do not claim to have cured these cases, but perhaps I come as near as others do with dilatation. I have not seen endometritis following the use of the galvanic current. I am not one of those who advocate electricity for everything, but I still think it has its place in the treatment of dysmenorrhœa. Take the case of a woman who will not submit to the more radical operation; she will be greatly relieved by this procedure. I have in mind one or two cases who have gone for nearly a year without treatment, with perfect comfort at each menstrual period, where, prior to treatment, they suffered greatly.

Dr. WALTER B. CHASE: I have so criticisms to offer, either of the chart or the deductions made by the author of the paper. I think it must be conceded that dysmenorrhœa is but a symptom, and we are much in the dark as to its cause, yet that does not justify us in folding

our hands and doing nothing for those who suffer. No doubt there is a tendency to fall into routine treatment of dysmenorrhœa, perhaps owing to the difficulty in many cases of learning the exact conditions responsible for it. I think we should never forget that women who have dysmenorrhœa have ovaries, and when they lose their ovaries they lose their dysmenorrhœa. Yet it does not follow that the ovarian function alone is responsible for the dysmenorrhœa, but there is some connection between the two. Now, the fact that some cases recover spontaneously (particularly those cases of ovarian neuralgias and membranous dysmenorrhœas), under favorable change of climate and tonic treatment, makes us conclude that there are cases which are not in any degree dependent on mechanical causes. We may ask a question in cases of dysmenorrhœa, What relation the displacement has to the suffering? Another condition more important to consider is that of endometritis. I believe the reason why, in a considerable number of cases, the routine treatment by dilatation and curettement gives relief, is not so much from the dilatation of the canal as from relief of the inflammatory condition. If we analyze these cases, as they present themselves, I am quite sure the principal ætiological factor will be found in the ovaries and the endometrium. I do not see as many cases belonging to the obstructive variety as formerly. In applying our remedies we must first make a correct diagnosis. We should bear in mind the ovarian element, and whether we distinguish it or not (Dr. Polak has said we probably cannot), we will be prepared to make a more rational application of correct principles for the relief of the disease. Before condemning the patient to operative procedures, one should make it a rule to build up the patient's general health and give her the benefit of change of climate and tonic treatment, unless the disease is plainly due to mechanical obstruction or endometritis, or to well-defined ovarian lesions.

Dr. W. J. CORCORAN: I have always been content to accept the term dysmenorrhœa as meaning painful menstruation. It should be considered as a symptom. Speaking of the classification, I should like to offer the only one that I have ever used. There are two classes simply: First, those in which you find a reason for it, and second, those in which you cannot.

Dr. ALBERT M. JUDD (closing the discussion): There is nothing in what Dr. Hyde has said with which I wish to disagree. He brings up a point in regard to cases of retroversion with adnexal troubles, some with dysmenorrhœa and some without. How can one regard dysmenorrhœa or retroverted uteri as coming from pelvic lesion, since

dysmenorrhœa may also be present in such uteri when there is no pelvic lesion? I am satisfied that in those cases in which the uterus is bound down in a mass of adhesions, and retroverted or retroflexed, the obstruction existing in the immovable uterus will aid in producing dysmenorrhœa; those that are not immovable I place in the neurotic class; *i.e.*, they have dysmenorrhœa because the neurotic ganglia are being pressed upon by the influx of blood, which pressure gives pain.

I do not like to disagree with Dr. McNaughton and Dr. Jewett in regard to obstruction causing dysmenorrhœa. I believe that, in those cases referred to by Dr. McNaughton as having pain during the influx of blood, the pain was not due to the obstruction but to the fact that the endometrium was much thickened. My way of looking at menstruation is to consider it a throwing off of this endometrium, which must first be loosened up. The difficulty in throwing off this endometrium caused the suffering the doctor speaks of. I can thoroughly agree with him when he speaks of the examination of young girls. I have never seen a case of dysmenorrhœa complicating coccygodynia, so I know nothing about it, except from what I have read in the text-books. In regard to what Dr. Chase says of falling into a routine treatment, I think he is right—we do. But because “in all cases of dysmenorrhœa these women have ovaries,” I do not believe he thinks we should take out the ovaries of all women suffering from dysmenorrhœa.

Official Transactions.

FREDERICK J. SCHOOP, *Secretary.*

---

## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*  
DR. T. W. CLEAVELAND, DR. G. H. MALLETT, DR. A. D. CHAFFEE.

## PÆDIATRICS.

## UNITED STATES.

*Analysis of 500 Cases of Lateral Curvature of the Spine, and Treatment.*

CHISHOLM WILLIAMS (*Pediatrics*, Jan. 25, 1901) says that the greater number of these were hospital patients, and in these the proportion of males to females was one to four; but in cases observed in private practice the ratio was one to seven. This difference is probably due to the girls in better homes not having much freedom of action. In 101 cases pain was constant, in 82 more it was present some of the time. The causes in the relative order of their frequency were, inequality of length of legs, flat foot, heredity, rickets, bad postural habits in children, general weakness, usually due to rapid growth or following fevers; occupation, knock-knee, infantile paralysis, adenoids, chest diseases, defective sight, amesial pelvis, rheumatoid arthritis, empyema, torticollis, and loss of an arm. In many cases there was a combination of several of these causes. The most common form of curvature was right dorsal convex and left lumbar convex, there being 257 cases of this condition; 90 had right total convex curves, 84 had left dorsal convex and right lumbar convex curves, 64 had left total convex, and 5 had triple curves; 333 patients had received no previous treatment, 118 had used axillary crutched-back supports, with laced side plates, and the remainder had used various appliances; 19 had tried the Swedish movement cures, with disastrous results, while 25 had been treated with special exercises and postures, and were more or less "muscle-bound," *i.e.*, the weak convexity muscles were strong, and the strong concavity muscles stronger, thus rendering the curvatures either stationary or worse, and owing to the increased strength of the resisting muscles, much trouble and power were needed to correct the results of the treatment; seven cases were



wearing braces to correct a habit of stooping, and lateral curvature had developed with, or after, their use.

Setting aside the cases affected with inequality of legs, flat-foot, or some other easily remedied causes, where the treatment, mechanical or otherwise, was obvious, no five of these consecutive cases were treated alike from start to finish. Believing that direct general muscular exercises *alone* do harm in most cases, the treatment was directed: (1) To the building up of the patient's general condition by fresh air, good food, clothing to allow of chest development, and tonics, such as cod-liver oil, hypophosphites, and bland preparations of iron. (2) To straightening the spinal column by manual, mechanical, or weight pressure, Barwell's rachylisis and lateral sling, and Volkmann's sloping seat. (3) To maintaining a corrected position by an apparatus devised by E. T. Chance, consisting of an adaptable metal splint, acting chiefly as a spinal extension. This apparatus does not fix the column as in a vise, but allows of slight muscular action, which brings about a lessening of the curves. It is to be worn night and day, and removed only for bathing and exercises. Even where no cure is obtainable, the splint affords comfort and prevents increase of deformity. Under the age of five years a padded leather or gutta-percha splint is usually sufficient. (4) To giving special exercise to each weak muscle or group of muscles, until the spine was straight, and then keeping up general muscular exercises. (5) To the use of massage, galvanism, etc., in special cases. Success depends upon the intelligent help and co-operation of the parents or friends, as well as the patient.

#### *Cereals, Emulsions and Proteids in Infant Feeding.*

T. M. ROTCH (*N. Y. Med. Jour.*, Jan. 26, 1901) says that a consideration of these three points is of great interest and importance in discussing the question of substitute infant feeding. The addition of cereals to the milk has been for one of two reasons: To give greater nutriment, by the addition of starch to the other elements in milk, or to aid in the digestion of the proteids by acting in a mechanical way to render the coagulum of the caseinogen finer and more nearly like the coagulum of human milk. The first reason is irrational, as Nature has demonstrated in the composition of milk the fact that starch is not needed during the first year of life. Careful experiments as to the value of grain water as a diluent, because of its mechanical action upon the coagulum, show that there is no difference in the action of the different cereals, if they are diluted alike. Modern methods

have shown that we are independent of this crude way of dealing with the question of the coagulum, and the writer is of the opinion that the addition of cereals to cow's milk for young infants is unnecessary and unwise.

In certain cases, where cream has been mixed with milk, water and lime water, the emulsion has seemed at times to be partially disturbed, as shown by coalesced fat globules floating on the top of the milk, in tubes, and some writers have thought that this disturbance contraindicated the general principles of percentage feeding. Others have claimed that the emulsion was more permanent when gravity, rather than centrifugal cream, was used. Experiments were made with modifications of milk, giving fat 3.50, milk sugar 6.00, and proteids 1.00; also, whole milk, with and without lime water, heated and unheated. Half of the modified milk was prepared with centrifugal, and half with gravity, cream. Tests of handling, carting around for eleven hours, placing in cool or in warm places, were made with all. The results showed no disturbance in the emulsion in most cases, except in warm weather, combined with much transportation. There was no difference in the action of the two kinds of cream under the same circumstances. Nor can the writer see that this disturbance of emulsion is liable to do any great harm, as only a small portion of the emulsified fat is disturbed. Up to within a few months it has been customary, when prescribing for a desired percentage of proteids, to write for the total amount of proteids. This is not correct, for when the same total proteids are prescribed in cow's milk as exist in human milk the coagulum is larger in the former, for König has shown that in this way we are giving about five-sixths of caseinogen instead of the one-third that exists in human milk. The proteids in milk are made up of caseinogen and whey proteids, but the proportion of the former to the latter in human milk is as one to two, while in cow's milk it is five to one. The best food for infants is one containing a larger amount of the whey proteids in proportion to the caseinogen. The results of the experiments with the whey mixtures are still under trial, but so far they bear out the theoretical idea that the coagula are distinctly finer than in an ordinary modified milk (with or without barley water) of the same total proteids. If, therefore, the caseinogen can be kept down to the proper proportion by the use of whey, the coagulum will be much finer, and the proper amount of total proteids easily obtained. It seems safe and practicable with a carefully preserved milk supply, such as comes from the laboratory forms to prescribe a percentage mixture which shall retain

its fats in emulsion, except under extraordinary circumstances of transit and heat; need not be pasteurized, except for long journeys in hot weather, and need not have cereals added for their mechanical action. It also seems that centrifugal cream is preferable to gravity cream, as the emulsion is equally permanent, and the cream half a day fresher.

### *Infantilism.*

W. T. ENGLISH (*Medical News*, Feb. 2, 1901) reports the case of a child, seven years old, whose physical and intellectual development seemed to cease somewhere in her second year. She measured only thirty-two inches, and weighed twenty-seven and a half pounds. The lips and other features were thick, and cushion-like rolls about the neck, axilla, abdomen, and lower extremities showed general dermal infiltration. Hair and nails dry, teeth illy formed, fontanelles persistent, the pulse rapid, but the temperature normal. She could neither walk nor stand alone. Speech, but rarely attempted, was unintelligible. Treatment was begun by the administration of  $2\frac{1}{2}$  grains of thyroid extract, given twice a day in bouillon; this was increased until, eight months later, 15 grains a day were given, with no unpleasant symptoms. The first two months there was loss in weight, due to the rapid diminution of the dermal thickening; during this time the fontanelles completely closed. After this, there was a steady gain in weight and height, so that eight months after the beginning of the treatment there had been a gain of ten pounds in weight and five inches in height. The hair, nails, and skin are now normal, and the child speaks, sings, and laughs. Although still smaller and less intelligent than the average child of her age the prognosis is full of hope with the continuance of the treatment, since such rapid progress has been made in so comparatively short a time.

### *Intracranial Hæmorrhage in the Newborn.*

W. REYNOLDS WILSON (*Philadelphia Med. Jour.*, Feb. 2, 1901) divides these hæmorrhages anatomically as follows: (1) Extrameningeal, (2) arachnoid or subdural, (3) subarachnoid, (4) ventricular, (5) mixed. Cerebral apoplexy proper is of rare occurrence in the newborn.

Extrameningeal hæmorrhage is rare, is usually the result of traumata sufficient to cause laceration of the middle meningeal artery or its branches, if extensive reveals itself directly by grave symptoms of

impaired motility and sensibility. Absorption of the fluid portion of the blood may take place, leaving the remainder of the effusion as a blood cyst.

Arachnoid or subdural hæmorrhage may be due to: (1) Direct injury to the vessels from compression of the head during labor. (2) Unusual molding of the head. (3) Torsion of the cervical vertebræ during forcible extraction. (4) Constriction and winding of the cord. (5) Compression of the thorax, due to protracted labor. (6) Neoplastic growths in the cranium. (7) Compression of the superior vena cava by bronchial nodes. (8) Compression of the abdominal vessels by tumors of the liver, spleen or mesenteric glands. (9) Cachexia of the newborn from hereditary disease or due to premature birth, predisposes to intracranial hæmorrhage.

Compression hæmorrhages often are of gradual occurrence, and may cause death without giving rise to marked symptoms. The points of rhexis are rarely to be found. The extravasation varies in extent from a few grams to 100 grams or more. According to Parrot it is even possible for the effused blood to become completely absorbed, or the solid part may be absorbed and the fluid part give rise to external hydrocephalus. Or the effused blood may separate into two layers, an imperfect coagulum bearing the imprint of the convolutions and a granular deposit adherent to the dura.

The causes of subarachnoid hæmorrhage are the same as those responsible for subdural extravasation. It may also result from the dyscrasia of purpura, and the conditions present in athrepsia, as well as from thrombosis of the sinuses of the dura mater and pressure from intracranial aneurisms. The effusion commonly occupies the convexities of the cerebral hemispheres and the surface of the cerebellum, and may be limited to one side of the brain surface. The veins of the pia become distended with blackish coagula, and the sinuses of the dura are also distended with clots. Where the effusion is abundant and of long standing, the convolutions may be flattened out of shape, and the brain be the seat of local atrophy.

Ventricular hæmorrhage usually occurs by extension from the subarachnoid space; it is rarely primary, except from rupture of the choroid plexus.

Mixed hæmorrhage is characterized by the presence of blood in the subdural and subarachnoid spaces, as well as in the ventricles, and is usually due to severe trauma. If the infant survive the first shock and asphyxia apt to accompany hæmorrhage, the primary symptoms may be masked, especially if the lesion be of intra-utrine life. The



train of symptoms is usually about as follows: somnolence, anorexia, digestive disturbances, with vomiting (the vomited matter sometimes containing bloody mucus); piercing, hoarse and fretful cry, contraction or dilation of the pupils, deviation of the eyes, convulsions, coma and death.

Secondary to the shock there may be diplegia, hemiplegia or paraplegia. Hyperæsthesia is a marked symptom. In other cases there has been a condition of total relaxation.

*Diagnosis.*—Evidences of a central paralysis usually indicate hæmorrhage. The anterior fontanelle bulges instead of being depressed, as in conditions of athrepsia. Autopsy commonly reveals ecchymoses in the pleura, pericardium, the mucosa of the small intestine and stomach, and hæmorrhagic infarcts of the lungs.

The primary indication in treatment in hæmorrhagic lesions occurring during birth, and associated with asphyxia, is to overcome the atelectasis by forced respiration, warm whiskey baths, etc. The infant should be immersed in a bath of a temperature of 105° F., at intervals of an hour, the surface gently rubbed while in the bath. In the intervals it should be wrapped in blankets, with hot-water bottles at the extremities and an ice-cap to the head;  $\frac{1}{2}$  grain of sodium bromide and  $\frac{1}{4}$  drop of tincture of digitalis may be given at two-hour intervals. The administration of oxygen is of value. Breast milk, peptonized milk or modified milk may be given by a medicine dropper. Whiskey is of no benefit.

The prognosis in extensive hæmorrhage is never good. The later effects of slight hæmorrhages, resulting in secondary pachymeningitis, may be permanent contractures, idiocy and sensorial disturbances. Hæmorrhagic foci, compatible with life, may exist, and give rise to external hydrocephalus. Where recovery occurs the diagnosis is open to doubt, as cerebral congestion may be accountable for the symptoms supposed to be due to compression.

#### *On the Sterilization of Milk; Its Advantages and Limitations.*

A. D. BLACKADER (*New York Med. Jour.*, Feb. 2, 1901) says that it must be admitted that commercial cow's milk is never absolutely sterile, though varying greatly as to the number and character of the micro-organisms. If obtained under good hygienic conditions, filtered, aerated, rapidly cooled, and then kept, without much agitation, at a temperature below 10° C., it will contain comparatively few bacteria. Milk obtained and kept under contrary conditions will not

only contain bacteria, but spores and toxins as well, and these cannot be destroyed without, in some measure, destroying the quality of the milk as a food. Russell's experiments show that pasteurization at 70° C. destroys all pathologic and putrefactive germs, as well as the lactic acid producing bacteria; and if this pasteurized milk be placed on ice or kept at a temperature only slightly above 0° C., it will remain sweet and free from bacteria for many days. If, however, the milk is not kept very cool, other fermentations may occur, producing changes in the milk, in some cases recognized with difficulty, but liable to produce grave disturbances in the intestinal tract. The same can be said of milk sterilized at a temperature of 100° C.

Russell, finding that milk sterilized at 70° C. acquired a scalded taste, and underwent some chemical change, tried pasteurization for fifteen minutes at 60° C. (140° F.). This destroyed from 98 to 99 per cent. of the bacteria; the pathogenic germs of diphtheria and typhoid are killed, but there is a doubt as to whether the destruction of the tubercle bacillus is insured by this temperature, although Theobald Smith, after many carefully conducted experiments, found that tubercle bacilli, of bovine origin, were invariably killed by pasteurization for twenty minutes at 60° C. Milk raised to a temperature of 100° C. is markedly altered in taste and smell. The lactalbumin and globulin are, to some extent, coagulated; the lecithin, nuclein and caseinogen are altered; the lactose is partially changed and the organic phosphorus is converted into an inorganic phosphate. These changes interfere with the digestibility of the milk. Wroblewski shows that certain of the calcium salts, necessary for the coagulation of the milk in the stomach, which in raw milk are in a soluble state, are made to enter into insoluble combinations by a high temperature. Other experiments show that it is probable that unheated milk contains ferment-like bodies which, when absorbed, are of distinct value to the economy. The investigations of Russell and Babcock prove that milk obtained in a condition of perfect sterility undergoes a self-digestion owing to the presence of a trypsin readily destroyed by heat. Other observations point to the fact that immunity to disease may be conveyed through the mother's milk, and that such immunity conferring substances are destroyed by a heat of 60° C. or over, thus rendering children fed exclusively on milk sterilized at a high temperature more liable to certain infections leading to disturbances in general nutrition. Alteration in the normal emulsion in the milk also takes place from heat, lessening its digestibility. Where fresh milk drawn with careful precautions can be obtained for infant feeding it is better used

raw, but where there is any uncertainty as to the milk supply it is probably the lesser of two evils to have the milk sterilized at the lowest efficient temperature, namely, 60° C., for about fifteen minutes.

### *Xeroderma Pigmentosum.*

BERNARD WOLFF (*Pediatrics*, Feb. 15, 1901) reports three cases of this comparatively rare disease. Since it was first identified and described by Kaposi, in 1870, less than a hundred cases have been reported, eighteen of which occurred in the United States. Due to the comparatively slight knowledge of the characteristics of the disease by the profession at large, it is probable that many cases remain unrecognized or are misnamed. It is a family disease, but neither hereditary nor congenital. It usually appears in the first year of life, and during the summer or late spring. There seem to be three fairly well defined stages. In infancy or very early childhood the face and hands of the affected child show numerous freckle-like maculæ, varying in size. At first brown, they soon become almost or quite black. The spotting gradually extends to other regions—the neck, chest, shoulders and lumbar regions. Elsewhere the skin is normal.

As the freckles increase in number and become closely aggregated, arborescent and punctate telangiectases appear, with here and there small pinkish areas of skin, which later become white. This marks the beginning of the angiomaticous and atrophic stage, which is progressive. As the atrophy becomes marked, the nostrils and lips become narrowed, the lower lids drawn down, producing ectropion and its attendant evils. In the writer's cases there was photophobia, although vision was normal. The third stage consists in the development of malignant new growths in the infected areas, which may soon result fatally, or the patient may live for years. The outgrowths partake of the character of the several types of cancer, without adhering closely or constantly to any one. The treatment is very ineffectual, amelioration of symptoms being the most that can be expected. Surgical interference, to prolong life, is advisable for the malign growths. Salicylic plaster, Fowler's solution and the so-called cancer caustics may be used. Antiseptic drying and dusting powders, and attention to the eyes, are also indicated.

The three children seen were a boy of eighteen months, a boy of six years, and a girl of eleven years. The father and mother, and three other children, were normal and healthy. The three children illustrated the three stages of the disease. The father stated that in each case the trouble started during the child's first summer, after exposure to the

sun, followed by "sunburn," which did not disappear until the appearance of the freckles. It was noticeable in the two older children that the parts of the body uncovered and exposed were the most affected..

The forearms were greatly altered, the skin being rough and mottled, and the fingers stiff and semi-flexed. There was no eruption on the palms, and the nails were normal. On the girl's face the nose and one eyelid were partially destroyed by carcinomatous growths. There were several small, offensive tibial ulcerations. Small scratches or abrasions upon the affected skin healed normally. The general health of the two younger children was still unaffected.

*The Relation of Scurvy to Recent Methods of Artificial Feeding.*

J. P. CROZER GRIFFITH (*N. Y. Med. Jour.*, February 23, 1901) draws his conclusions from the report of the committee appointed by the American Pædiatric Society, and from his individual experience with sixteen cases during the last eighteen months. There were 379 cases reported to the committee and in 356 of these the diet of the child was stated. In 214 cases the food was a proprietary one, although in some cases sterilized milk or some other article which has been suspected ætiologically had been given in connection with the food. In 68 cases sterilized milk was the only food given, while pasteurized milk alone was used in 16 cases. This is weighty inferential evidence that cooked milk must be suspected as a cause of scurvy in infants. Over 200 of the children received starchy foods, either wholly or in part. Several children developed the disease while on a diet of raw milk, and 10 while on breast-milk alone, an indication that a fault in the proportions of the constituents of the diet must be looked for. While in fresh fruit-juice we possess a rapid and certain specific for scurvy, it is impossible, in most of the cases reported to the committee, to say how much of the improvement was due to the fruit-juice and how much to alteration in the diet, for in only 3 cases was fruit-juice used without change in the food. While the children doubtless were benefited, scientific investigation suffered. In 58 cases a change in diet alone gave a successful result. In these 58 cases were included 34 infants fed on proprietary foods, including 6 fed wholly on condensed milk; 18 had received only sterilized milk, and one child recovered after a change from breast-milk to sterilized milk.

The 16 cases treated by the writer support the view that patented foods, either because they are deficient in certain ingredients or because they contain or are derived from starch, often produce infantile scurvy.



Two of the cases threw suspicion on barley water as the cause. These cases indicate also that the sterilization of milk is a factor. In several cases, however, scurvy developed where the milk was not long heated or even raw. In these cases there was too low a percentage of proteids. It was found also that the beneficial action of the orange-juice began and continued in many cases without change in the food. This point is important, for it shows that it is not always necessary to change the food which has seemed to agree with a child, because symptoms of scurvy are appearing. Better the danger of the development of a disease so amenable to treatment as scurvy than to incur the danger of a wasting diarrhœa or other digestive disturbance, the result of over-strong food. The careful study of these cases has convinced the writer that while certain classes of foods are apt to produce scurvy, yet the individual element is remarkably present in this disease, and "what is one baby's meat is another baby's poison."

*Report of a Case of Diabetes in an Infant.*

WM. E. YOUNG (*Archives of Pediatrics*, March, 1901) reports the case of a six months' old foundling, admitted to the Infants' Hospital in good condition. After two weeks he began to vomit, and the stools were green and contained undigested food. The appetite was good, but a steady decrease in weight began, continuing until emaciation was extreme. The skin was dry, the tongue red and the child very nervous. The abdomen was slightly distended, and there was a swelling in both lumbar regions. The liver was slightly enlarged, and the kidneys four times their normal size. The urine had a specific gravity of 1030, sugar 5 per cent., albumin a trace and a few casts. The diet was pasteurized milk, formula 4-7-2, and there had never been any starchy diluent. Small doses of codeia failed to lessen the sugar. Three weeks later pneumonia set in, and the child died in three days. *Postmortem*: Kidneys much enlarged; cortical layer greenish-white, and indurated; marked hyperæmia and inflammation of parenchyma. Mucous membrane of bladder inflamed, liver enlarged, other organs normal. There was no family history, so the question of heredity was unanswered. The cause in this case was obscure. Marasmus, athrepsia and gastrointestinal disorders were excluded in this case, for the child remained in good health for two weeks after admission to the hospital.

*Some Observations upon the Temperatures of Apparently Healthy Children: An Experimental Study.*

W. M. DONALD (*Archives of Pediatrics*, March, 1901), in August,

1899, during a period of comparatively cool weather, conducted a series of experiments on twenty healthy children, ranging in age from three to twelve years, to determine something of the daily variation in temperature in the same healthy child, and to study the individual variations in a group of healthy children. The morning and evening temperatures were taken regularly for two weeks, together with the temperature of the room in which they were examined. The children were leading perfectly regular, normal lives. During the fourteen days there were twenty-eight collective readings, twelve of which gave an average temperature for the twenty children of  $99^{\circ}$  or over. The higher readings occurred in the afternoon test, as a rule, but on five different occasions the average morning temperature was higher than on the evening of the same day.

Coming to the individual records, there were in all 560 records. Of these thirteen showed  $100^{\circ}$  or over;  $102^{\circ}$  was the highest temperature recorded, and  $96.4^{\circ}$  the lowest. In 30 per cent. there was a tendency towards a constant high temperature. In one boy of seven, the evening temperature was, with one exception, always over  $99^{\circ}$ . Two other boys, eight years old, had over  $99^{\circ}$  in 80 per cent. of their evening records. Two children had subnormal temperatures on five different evenings. The temperature of the external air was so uniform that little could be learned of the effect on bodily temperature of sudden changes in the air. It was found that when some of the children had been playing vigorously, and came into the examining room flushed and heated, the range of temperature was apt to be lower than at other times. Four carefully tested thermometers were used in the experiments. These children were selected from 100, as being in perfect health. No one was sick at any time during the tests, and none has developed any illness since.

From these experiments it may be deduced: (1) That the normal temperature in children is unstable and variable; (2) that there is a tendency in some individuals to maintain a constant high temperature, a temperature which would be considered pyrexia in other children; (3) that there is a tendency to a slightly higher range of temperature as normal in children than in adults.

*The Diagnosis and Treatment of Adenoids by the General Practitioner.*

FRANCIS HUBER (*Archives of Pediatrics*, March, 1901) says that in many cases in general practice the prominent symptoms for which the patients are presented mask the original cause of the trouble, and

the presence of adenoids in the nasopharynx may be overlooked. Ear trouble, facial spasm and other nervous disorders, indigestion, thoracic deformities, incontinence of urine, bronchial and pulmonary disorders may all be dependent upon existing adenoids. Recurring attacks of nasal catarrh, or a tendency to catch cold easily in a young child, should direct attention to the nasopharynx. In infants the head is often thrown back to facilitate breathing, nursing is attended with difficulty, and snoring is often present during sleep. Falling backward of the tongue is more liable to occur in diseases attended by muscular weakness, in infants with adenoids.

The diagnosis may be made (*a*) from the symptoms, (*b*) by means of the rhinal mirror, (*c*) by digital examination. The use of the mirror for posterior rhinoscopy is usually impossible in children. Where, for some reason, digital exploration seems unadvisable at the time, reliance may be placed upon two symptoms. First: The presence of two small lymph nodes, painless and freely movable, one on either side, at the angle of the lower jaw. These are apt to be swollen with each new catarrhal inflammation, but subside to their former size with the disappearance of the nasal trouble, provided a mixed infection has not taken place. Second: If the tonsils do not obstruct the view, numerous small lymphoid hypertrophies will be found upon the mucous membrane of the posterior pharynx, and occasionally larger masses are present at the level of the soft palate. The appearance is characteristic, the isolated prominences, pearly and translucent, resemble sections of boiled sago, projecting above the mucous membrane. During the last seven years, at the Vanderbilt Clinic, preliminary exploration has not been deemed necessary when these two signs were present, and masses of adenoids were always found at the time of operation.

The earlier that treatment is instituted the less likely are secondary changes to occur, such as thoracic deformities, abnormalities in the jaws, hard palate or teeth, or chronic ear troubles. In mild cases, with no symptoms except occasional attacks of catarrh, attention to the general health, the administration of the syrup of iodide of iron in appropriate doses and careful nasal irrigation may be tried for a time, but if the tissues undergo further growth, producing nasal obstruction, operative treatment is indicated. The removal may be accomplished by the fingers, forceps or curette. Personally, the writer prefers Delstaunche's modification of the Gottstein curette. For infants, a small Hooper forceps may be used. For a week preceding the operation the nose should be irrigated three times daily with warm salt solution, using a nasal cup or medicine dropper. The writer prefers to operate with-

out narcosis, with the patient in the "intubation position." The children usually have general systemic weakness, with diminished resistance to shock, and the danger of sudden cardiac paralysis under an anæsthetic is greater than usual. Halstead recommends a preliminary hypodermic of atropia, and the local application of cocaine to the nose with a cotton swab, before the anæsthetic is given. He uses ether in preference to chloroform or nitrous oxide gas.

The existence of acute otitis, bronchitis, or an inflammatory process in any part of the respiratory tract, is a contraindication to operation. In chronic suppurative ear troubles, speedy improvement often follows the removal of adenoids. "Bleeders," or those who have had petechiæ, are best left alone. The clothing around the chest should be loosened, or removed, at the time of operation. The after-treatment consists in instilling warm salt water into the nares, every few hours; this must be continued, at longer intervals, for several weeks. A liquid diet and rest should be ordered for a few days. Internally, iron, arsenic and strychnia, or the syrup of the iodide of iron, should be continued for months. Where the cartilaginous or bony septum is thickened or deflected, or anterior or posterior turbinate hypertrophies exist, further treatment and operation may be required. This must be remembered in making a prognosis, in order to avoid disappointment.

*Case of Apparent Recovery from a Congenital Abnormality of the Heart. (Patent Ductus Arteriosus?)*

JOHN THOMSON (*Archives of Pediatrics*, March, 1901) reports the case of a puny child, nine weeks old, who was brought for treatment, owing to the cyanosis of the feet, hands and face. There was marked increase in the blueness when the child cried. There was slight rickety beading of the ribs, the pulse was 156, but regular, the respirations 36. Lungs and abdominal organs normal. Food had been condensed milk at first, afterwards diluted cow's milk. She was the tenth child of healthy parents. The heart's apex-beat was indistinct, in the fourth interspace, one-third inch outside the nipple line. There was no thrill, no increase of cardiac dulness, or enlargement of the right side of the heart. A loud systolic murmur was audible over the base of the heart, especially at the left of the sternum, but also in the axilla and interscapular regions. The child's feeding was regulated, and, when seen two months later, the cyanosis was much less marked, the murmur not as loud, and the child had gained in health and flesh. Four months later the cyanosis had entirely disappeared, but the heart murmur was



present, and the pulse still rapid, 150. The child was not seen again for nearly seven years. She gave a history of fairly good health during that time. There was no cyanosis or clubbing of the fingers, the pulse was normal in rate and rhythm, and neither the writer nor his colleague could detect any abnormality whatever on examination of the heart. It seems probable that the murmur and other signs of circulatory disturbance may have been due to a patent ductus arteriosus, and their disappearance to the closure of its lumen.

#### GREAT BRITAIN.

##### *Acute Dilatation of the Heart in Diphtheria, Influenza, and Rheumatic Fever.*

D. B. LEES (*The British Med. Jour.*, Jan. 5, 1901) says that sudden, often unexpected, death is sometimes the result of an attack of diphtheria in a child, and cites seven cases in illustration. Such occurrences call for study of the indications of danger in these cases. A common explanation is neuritis of the vagus, causing arrest of the heart. The paralysis of the diaphragm or intercostal muscles, sometimes produced by diphtheria, may be due to neuritis of the phrenic or intercostal nerves, but not necessarily. The action of the heart is maintained by the automatic contractions of the cardiac muscles, and it is by no means certain that a neuritis of the vagus would arrest the working of the heart. It seems more likely that the fatal syncope following diphtheria is due to a diseased condition of the muscular wall of the heart itself, and careful study of the heart wall in fatal cases of diphtheria and rheumatic fever, by competent observers, has shown very marked degeneration of the cardiac muscular fibers, and complete destruction of some parts of them. It is safe to conclude that even in cases which recover there is more or less degeneration of the cardiac muscle. Can this be detected by clinical examination, and fatal syncope be avoided by extreme care? The indications to be sought for are: (1) Feebleness of the pulse wave. (2) Feebleness and diffusion of the cardiac impulse. (3) Extension of the cardiac dulness to the left. (4) Feebleness of the first sound at the apex, with accentuation of the pulmonary second sound. These four indications of a weakened left ventricle would naturally be expected in fatty degeneration of the heart muscle, but there is another sign, not readily anticipated, *viz.*: (5) Marked accentuation of the aortic second sound. This is often decided, yet without tension of the radial pulse. The tension of the aorta must be raised by a contraction of the splanchnic

arterioles, through some central vasomotor irritation caused by toxins. It is obvious that if vascular tension is increased, when the ventricle is weak, the danger of fatal syncope is great. The examination with the stethoscope has been too dominant, and palpation and percussion are too much neglected or inefficiently performed. The superficial cardiac dulness (often the only point investigated, merely tells how much of the heart is not covered by lung, but does not show its actual size; yet the determination of this actual size, and the discovery of any enlargement of the left ventricle or right auricle, is of vital importance. A finger of the left hand is the best pleximeter; the percussion should be *light*, and only the terminal phalanx should be pressed on the spot where the percussion is to be practiced, the rest of the finger being kept away from the chest wall. forcible percussion brings out pulmonary and gastric resonance from a distance, and confuses the result. In a child with diphtheria, cardiac dulness is usually increased toward the left. The extent of this increase is important. If only one finger breadth outside the left nipple line, the danger is not usually immediate. But a greater area of dulness indicates danger, and the child should not be allowed to sit up in bed for a single moment. The increase in dulness is often very rapid, an extension from one finger-breadth to two sometimes occurring in a few hours. Vomiting often accompanies this sudden dilatation, and is always indicative of danger. When the first shock of acute dilatation has passed off the little patient may look and feel quite well, and it is this that leads to sudden death, owing to relaxation of the care, and the allowing of the patient to sit up or even stand. The importance of repeated percussion and palpation is urged, and a careful watch should be kept of the heart for two months. The dilatation may occur at an early period, or after several weeks; it is not usually permanent, but in one case it remained, causing dyspnoea, dropsy, and such imminent danger that leeches were used.

In influenza, rapid dilatation of the heart may occur within a day or two after the onset of the disease. Here, also, the extension of the dulness may be rapid, and frequent examinations are demanded. It is not as frequent in children as in adults, the reverse being true in diphtheria. The dilatation caused by influenza is more apt to be permanent, and thrombosis is of frequent occurrence. A minor degree of dilatation may cause merely a feeling of incapacity for exertion, and is too often overlooked and its importance underestimated. Active exertion may result seriously for such patients.

In rheumatic fever, even of a subacute type, acute dilatation seems

to be invariably present. After the attack is over the cardiac dulness may become normal again. The dilatation in rheumatic fever, even if extreme, is much less dangerous than in diphtheria or influenza, due probably to the different effect of the toxins. Where, however, the extension is sudden, there will be symptoms of collapse, vomiting, coldness, and pallor. Mitral valvulitis is usually present, causing an apex systolic murmur, and often a presystolic murmur. Pericarditis or pericardial adhesion may also exist. But the dilatation is of much greater importance in children than the valvular lesions. The slightest suspicion of rheumatism in a child should lead to careful and repeated examinations of the heart.

The importance of carefully ascertaining the right limit of the heart is especially urged. Dilatation of the right auricle is easily detected by percussion in the fourth right interspace, and weakness of the right ventricle by palpation of the epigastric region. These conditions are usually accompanied by marked dyspnoea, and often by lividity. Marked dilatation of the right auricle may cause death from asphyxia, and urgently demands immediate venesection or leeching.

#### CANADA.

##### *Sudden Death in Infancy and Childhood.*

ALBERT E. VIPOND (*The Montreal Med. Jour.*, Jan., 1901) says that while a cause of sudden death in an adult is usually revealed in a post-mortem examination, it is not always in infants, and from a medico-legal point of view it is important to be well acquainted with the causes of sudden death in children. There are two reasons why sudden death is comparatively frequent in infants: First, the extreme irritability of the nervous system and the slight inhibitory power of the cortical centers; and, second, the frequency of pneumonia and other forms of pulmonary congestion.

*The Nervous System.*—Under this head the most frequent cause of death is convulsions, caused either by stomach or intestinal irritation, or preceding the acute exanthemata. In convulsions, death may be due to either asphyxia or heat failure. A slight blow over the larynx or stomach has caused death. Laryngismus stridulous, commonly associated with rickets or tetany, may result fatally. Injuries to the brain, such as compression or concussion, inflammatory conditions of the brain, a tumor in the medulla, producing bulbar symptoms, paralysis of the respiratory muscles, rupture of an abscess in the brain, dislocation of the odontoid process of the axis, due to sloughing of the anterior

ligament from caries, and prolonged spasm in ordinary epilepsy, may all cause sudden death.

*The Circulatory System.*—In congenital or acquired heart disease death may occur suddenly. Cases of sudden death, attributed to diphtheria, scarlet fever, etc., are often found to be associated with congenital malformations of the heart, which had not been suspected. Fœtal endocarditis is usually due to congenital syphilis, and is often suddenly fatal. Pericarditis and myocarditis may end fatally and suddenly.

*The Respiratory System.*—Here the cause of sudden death may be atelectasis, either congenital or acquired, pressure of a large pleural effusion, the withdrawal of a large amount of fluid suddenly from the chest cavity, asphyxia resulting from the pressure of an enlarged thymus gland, enlarged thyroid or bronchial glands, the rupture of a tuberculous abscess into the trachea, pneumonia, polypus of the trachea, aspiration of regurgitated food into the air passages, and œdema of the glottis. The swallowing of acid or the inhaling of steam may cause a fatal œdema.

*The Digestive System.*—Sudden death may result from the absorption of toxins, the symptoms resembling uræmic poisoning. Ulceration of the stomach or duodenum may cause death, without giving rise to any previous symptoms. Hæmorrhage from the stomach or intestines in new-born children, congenital insufficiency of the diaphragm, with hernia of the abdominal contents into the thoracic cavity, strangulated hernia, or intestinal perforation may cause sudden death.

*Infectious Diseases.*—Sudden death may occur in scarlet fever or diphtheria, from paralysis of the heart muscle, dilatation of the heart, heart failure due to intensity of the toxins, and in the late stages of scarlet fever from uræmia. In typhoid it may be due to parenchymatous degeneration of the heart muscle, intestinal hæmorrhage, or perforation. In whooping-cough, spasm of the glottis, or the swallowing of the tongue in young infants may result fatally.

*Accidental and Rare Conditions.*—Poisons, hæmorrhages from injuries or surgical procedures, overheating, embolism, hæmorrhage in the suprarenal capsule and retro-œsophageal abscess, together with the accidents occurring at birth, may be included in this list.

---



## GYNÆCOLOGY.

## UNITED STATES.

*On Gonorrhœal Cystitis in the Female.*

F. BIERHOFF (*Medical News*, Jan. 12, 1901) while disagreeing with Kolishcher's view that a diagnosis of gonorrhœal cystitis in the female can only be made by the cystoscope, considers it an aid to certain diagnosis, and a means of ascertaining the exact portion of the bladder involved and the extent of the involvement. The danger, under proper precautions, of performing cystoscopy in the female is so much less than in the male that not the same degree of hesitancy is felt about the operation. In every case of acid cystitis, before any treatment is begun, a microscopic examination of the urinary sediment should be made. The gonococcus is found both intra- and extracellular in this sediment, as well as in the urethral discharge. The symptoms of frequency of urination, cutting or burning pain during the act, tenesmus preceding or following, turbidity and acidity of the urine, and the presence of small quantities of blood appearing toward the end of urination, point to gonorrhœal cystitis. The presence of a urethral or vaginal discharge is usually noted, but this may be very slight. The appearance of the bladder in a cystoscopic examination is well known.

It was for a long time the custom to treat the acute stage of gonorrhœa by keeping the patient quiet, and giving food and medicine tending to render the urine bland and unirritating. But now that in protargol and largin we possess two reliable preparations, there is no excuse for delaying treatment. The diet should be restricted and frequent hot sitz-baths ordered. After irrigating the urethra with a  $\frac{1}{2}$ -per-cent. protargol solution, 75 c.c. of this fluid may be injected directly into the bladder through the urethra (without a catheter), and allowed to remain there until the next urination. After irrigating the vagina with the same solution, a strip of gauze, saturated with a 5-per-cent. solution of protargol in glycerine and water, is inserted in the vagina, filling it, and protruding sufficiently to rest between the labia. This treatment is to be repeated daily. In the five cases reported, this treatment was pursued with excellent and speedy results. In only one case was there the addition of irrigations and

injections of mild solutions of nitrate of silver. The case should not be considered cured until the discharge has ceased, and remains absent after various provocative measures (coitus, menstruation, etc.), until the urethral scrapings are epithelial and free from gonococci, until the urine is perfectly clear and the sediment normal and free from gonococci, and until the cystoscope reveals a vesical mucous membrane free from all traces of inflammation.

*A Case of Obliteration of the Right Ureter by a Calcified Fibroid: Removal of Fibroid and Implantation of Ureter into the Bladder; Recovery.*

MAURICE H. RICHARDSON (*Boston Med. and Surg. Jour.*, Jan. 24, 1901) reports the case of a woman of fifty-eight, who first noticed, ten years before, a tumor in the right lower abdomen, which gradually increased in size. At intervals there were attacks of pain in this tumor. For the past three years the pain has been more frequent and more severe, there has been loss of weight and appetite, the bowels have been constipated, micturition has been frequent and painful, with cloudy, foul-odored urine. A large, fluctuating tumor was found in the lower abdomen. On opening the abdomen, the tumor proved to be a fibroid of the uterus, upon which, or a part of which, was a large cyst. The deeper portions, in the right side of the pelvis, were evidently calcified. Separation of the tumor became more difficult as the calcified portions were reached, the attachments being broad and firm. As the lower portion was being separated, a clear fluid was noticed escaping rapidly from an orifice, which proved to be the right ureter. This apparently ended in the calcified mass, as beyond this point, which was an inch or more from the bladder, no distal orifice of the ureter could be found. Above this the ureter was dilated and tortuous, and the pelvis of the right kidney was much dilated. It became evident that the ureter ended at the plane of cleavage, and that the separation of the tumor had torn across the obstructed end. End-to-end union was impossible, for no distal end could be found. The proximal end, for an inch or so, was freed until it could be brought to the bladder, into which a small opening was made, and into it half an inch of the lax ureter was thrust. The bladder was sutured to the sides of the ureter by interrupted sutures of fine silk. Separation of the tumor at the left showed that it made a part of the sigmoid flexure, and removal left a gap in that viscus, which was closed with silk sutures. In spite of the complications, recovery was uninterrupted and complete.

*Sarcoma of the Uterus.*

VAN BUREN KNOTT (*Annals of Surgery*, February, 1901) divides uterine sarcomata into three groups: (1) Those originating in the mucosa. (2) Those originating in the parenchyma. (3) Those springing from the cervix. The first class is generally supposed to be most frequent, but it is often impossible to say whether the growth originated in the fundus or in the parenchyma, with extension into and through the mucosa. Sarcoma of the mucosa may be circumscribed or diffuse; the former are very rare, are polypoid in appearance, and are often mistaken for a simple polypus. When diffuse, the growth appears in irregular masses, spread out over the uterine mucosa, and composed of round and spindle cells, with little intercellular substance. They may by extension perforate the uterine wall, and cause a fatal peritonitis. Diffuse sarcoma of the parenchyma is rare. The circumscribed form closely resembles a fibromyoma, but is rarely encapsulated. Cystic degeneration of this variety has been noted. Sarcoma of the cervix also assumes two forms, one being an ordinary spindle-cell involvement, which may extend to the corpus uteri, the other presenting peculiar characteristics, and known as the grape-like or botryoidal cervical sarcoma, consisting of small, oval masses, from one-half to one inch in diameter, containing a sticky, gelatinous fluid. This growth may be practically confined to the cervix, or may hang down, filling the vagina.

There is one other well-marked variety of sarcoma uteri—sarcoma deciduo-cellulare. This is the most malignant form, and only develops after labor at full term, or after an abortion or molar pregnancy, and takes its origin from the chorionic villi. It is almost invariably accompanied by pulmonary metastasis of the disease. The early diagnosis of this form of sarcoma is especially important, as it so rapidly tends to a fatal termination. When, after labor or abortion, uterine hæmorrhage persists, curetting fails to reveal a cause, and the uterus gradually enlarges, microscopical examination should be made at once, to establish or exclude the existence of sarcoma. The early and complete removal of the uterus and appendages offers the only hope for life.

A case operated upon by the writer was unique in its pathology, combining the features of a diffuse sarcoma of the muscular wall with a botryoidal sarcoma of the cervix, although the latter bunch of small growths did not contain the gelatinous fluid so characteristic of this form. The uterus was the size of a foetal head, and attached to either side, projecting into the broad ligament, were large growths, of a dark liver color. The ovaries and tubes seemed normal. The entire mass of

tumors, together with uterus, tubes and ovaries, were removed, and the patient made an excellent recovery, and is well six months after the operation, but it is too soon to hope that recurrence will not appear.

*A Peculiar Accident from the Use of Rubber Gloves.*

EMORY LANPHEAR (*Amer. Jour. Surg. and Gyn.*, Feb., 1901) says that, while making an abdominal section by artificial light, the uterine artery was cut beyond the point of ligation. The operator's rubber-gloved finger was instantly pressed against the bleeding point, while an assistant passed a chromicized catgut ligature around the vessel and tied it tightly. The tip of the rubber-glove finger was caught in the ligature, and amputated. The light was so poor, and the patient's condition demanded such haste that the accident was not noticed. The patient did badly, having a temperature of 100° from the first, and a constant dull pain deep in the pelvis, on the left side. On the tenth day vaginal examination revealed a lump at the left of the cervix, which gradually increased in size. Two weeks after the operation a vaginal incision was made, and blunt dissection made up into the center of the mass. A gush of blood followed, then a mass of half-organized clot surrounding the piece of rubber, still held in the grasp of the ligature, came away. The cavity was irrigated, and gauze drainage was maintained for two days. The patient made a speedy recovery. Fortunately, neither the pelvis nor the finger inside of the glove were infected, or a fatal result might readily have followed.

*Nephritis complicating Gynæcological Disease.*

GEO. ERETY SHOEMAKER (*Penn. Med. Jour.*, Feb., 1901) says that in a given series of gynæcological cases a large percentage will be found to present some form of trouble referable to the kidney, varying from purely functional inefficiency to serious disease. Almost every case of neurotic gynæcological trouble presents the phenomena of defective renal action without any definite kidney lesion. This is due largely to the inactive life; the circulation is sluggish, the heart flabby and weak, the skin inactive from lack of bathing and friction, and the bowels torpid. Usually but little water is taken. The progress from mere inefficiency of the kidney to inflammatory tissue changes is often rapid. Tumor pressure may cause passive congestion and altered capillary circulation, and, if long continued, structural disease may result. Nephritis may also result from infection through the bladder or ure-



thra. Injury during childbirth, unclean catheters, retention of urine, gonorrhœa, may all be causes. A condition of sacculated bladder, due to injury to the anterior wall of the vagina during labor, is too often overlooked, even when perineal repairs are undertaken. In bad cases almost the whole bladder may descend, but lesser degrees of cystocele are very common, and lead to imperfect emptying of the bladder, the resultant decomposition of residual urine, and, finally, a secondary nephritis. Chronic pelvic suppuration produces a mild form of chronic septic poisoning, and is a fertile source of chronic kidney disease. As contributing causes of nephritis in women may be mentioned the wearing of thin-soled shoes in bad weather, and lack of warm clothing around the thighs and legs.

Chronic nephritis is not often the sole cause of post-operative death, but such cases bear badly the least amount of sepsis. Ether may arouse a latent kidney disease, and the free use of mercurial antiseptics or calomel is harmful in these cases. Acute renal irritation, due to the combined effects of ether, shock and exposure, may cause a sudden high temperature after operation, and this condition must be distinguished from sepsis. There will be found to be a sudden diminution in the total quantity of urine. There may be headache and nausea, but the pulse-rate does not increase in proportion to the temperature. Milk diet, a digitalis plaster to the back, and brisk purgation with salines will usually cause the temperature to become normal in a few days, and the tube casts will disappear from the urine.

When an operation is imperatively called for, the presence of chronic nephritis should rarely forbid it. The added risk should be stated, and careful preparation of the skin, kidneys and bowels should be made. It will often happen that a chronic kidney trouble is greatly improved by the removal of abdominal tumors or pus tubes. The day is past when the establishment of a kidney lesion means a death warrant or forbids a needed abdominal operation.

*The Local Destruction and Regional Sterilization of Cancer by the Cataphoric Diffusion of the Electrolytic Salts of Mercury: A Further Report.*

G. BETTON MASSEY (*Penn. Med. Jour.*, Feb., 1901) says that since the initial stage of malignant growths consists invariably of a purely local colony of germ-infected cells, with proliferating prolongations into the surrounding tissues, it is the purpose of this method of treatment to diffuse by cataphoresis sufficient electrolytic salts of mercury,

in a nascent condition, to produce the destruction of the growth and the sterilization of the surrounding tissues. The first effect is gained by the production of an area of complete necrosis of all cell life, including all the apparent portions of the malignant growth, which subsequently separates as an inodorous slough; and the second by the diffusion into the surrounding tissues of enough of the mercuric salts to result in the death of the lowly-organized cancer cells, without harm to the normal tissue elements.

This can usually be accomplished by one application, varying in duration from fifteen minutes to two hours and a half, and since any cancerous growth but the very smallest requires a current strength varying from 300 to 800 milliamperes, it is essential that the patient should be anæsthetized. Convalescence is painless. The slough, not usually requiring antiseptic dressings, as it is impregnated with oxychloride of mercury, separates in from twelve days to three weeks, and healthy granulations appear.

A battery producing a current of 160 volts, with a capacity of three ampere hours, is required. The active electrode is a tubular puncture electrode of gold, stiffened by an inner tube of platinum, the gold point being amalgamated with mercury before use. This is introduced into the growth, and an excess of pure metallic mercury injected to constitute the soluble mercuric electrode, the gold itself acting as a means of inserting the mercury and conducting the current. This active electrode is connected with the positive pole, the negative pole being attached to a very thick, moist pad, laid on a lead plate as large as the patient's back, on which the latter lies, on a rubber-sheeted spring cot.

The method is adapted to cases that are still local, situated externally or within easily accessible cavities. It is especially adapted to small growths appearing under the skin after knife operations, and to malignant affections in the mouth, vagina and rectum, since the sense of touch is almost equal to sight, and the progressive softening of the indurated parts can be accurately gauged by the finger. The operation is bloodless, recurrence is less probable, and cancer may be eradicated from an organ but partially affected without destruction of the entire organ. In 37 cases treated by the writer, 10 have been cured; 9 were benefited for longer or shorter periods, the recurrence occurring in a different site, showing that it was due to the dislodgment of emboli from the primary growth previous to its destruction by cataphoresis. Two died during the operation. The other thirteen failures were due to insufficient diffusion or mercury for various reasons—poor batteries, not long enough application of a strong current, nearness of the growth

to the brain, or other important structures. Many of these cases were late stages of bad recurrence after knife operations.

*Conservatism in Pelvic Suppuration.*

JOHN O. POLAK (*Denver Med. Times*, Feb., 1901) says that true conservatism in suppuration within the pelvis means the early relief of the infection, before the structures of the several organs composing the utero-genital tract become extensively involved or destroyed. Posterior vaginal section and drainage may be applied to almost every form of pelvic infection, and will often save pelvic organs capable of performing their functions, with little or no pain. The operation has the advantages of being rapid, free from shock, and within the ability of every intelligent practitioner who appreciates and practices thorough asepsis.

In gonorrhœal invasion, where the inflammation had passed beyond the uterus into the tubes, several patients, on whom posterior section and drainage had been performed, have gone two years or more without pain or pelvic disturbance, although the tendency in these cases is to relapse. Pyosalpinx, pelvic peritonitis and parametritic abscess may be treated by this method. In tubo-ovarian abscess it is the writer's custom to make a vaginal section and evacuate the pus, then several months later, at an abdominal section, such portions of the tubes and ovaries may be removed as seem to be structurally destroyed. In a case of septic peritonitis following criminal abortion, after exploring the uterus, which was found empty, and giving an intra-uterine douche of boiled water, the cul-de-sac was opened, allowing about a quart of sanguino-purulent fluid to escape. A large folded drain of gauze was introduced, and allowed to remain for several days. Recovery was uneventful. In pus tubes, due to gonorrhœal, staphylococcic or streptococcic infection, after making the posterior vaginal incision, the tissues are peeled up from the back of the uterus with the finger until the peritonæum is exposed, and the finger pushed through this into the cul-de-sac. The opening is enlarged by the fingers, the uterus and tubes freed from adhesions, and the tubes brought down into the vagina for inspection. An incision is made along the superior margin of the enlarged tube, the pus evacuated, the cavity sponged dry, and a probe passed into the uterus. The tubal mucosa is sutured to the peritonæal coat with fine catgut. The pelvis is sponged dry, and loosely filled with strips of 5-per-cent. iodoform gauze, the ends of which come out of the vagina and lie in a mass of dry, sterile gauze, which should be frequently changed. The gauze drain is demoved at the end of six days,

and not replaced. A semi-recumbent position favors drainage. No form of pelvic irrigation is to be employed.

While this operation may be only palliative in some cases, the temporary relief of the toxæmia and the general improvement in the patient puts her in better condition for a subsequent radical operation.

*Oöphorectomy and Hysterectomy for Epilepsy.*

WALTER LINDLEY (*Med. Sentinel*, Feb., 1901) says that the intimate relations of the uterus and ovaries, especially at the menstrual period, to the nervous system, and the fact that pregnancy has been found, in many cases, to have an ameliorating effect on epilepsy, has led observers to think that the absence of menstruation might be beneficial to the epileptic. In three cases the writer has tried operative procedures with this end in view. Oöphorectomy was performed in the first instance, the patient being brought from an insane asylum by her friends, who urged this as a last resort. The patient made a quick recovery, but the convulsions continued until her death, six months later, at the asylum. In the second case the patient began to have convulsions when twenty-three years old, and for twelve years they had been increasing in frequency. The uterus was hypertrophied, lacerated and retroverted, and was removed, together with the ovaries. She was entirely free from any symptoms of epilepsy for several weeks, then the attacks returned as before. In the third case, the first epileptic seizure had occurred on the first day of the first menstrual period, and from that time on the epileptic seizures and menstruation had been synchronous. At times, when the menstrual period had been missed, the convulsions had not occurred. An oöphorectomy was performed, and although several months have passed there has been no recurrence of the epileptic seizures, and her mind, which was becoming weak, has gained. While it is too soon to speak decidedly as to her recovery, the outlook is hopeful. While in the majority of cases the removal of the ovaries offers little hope, in certain cases, like the last mentioned, where the seizures seem dependent on the menstruation, the operation is certainly justifiable.

*The Closure of Cutaneous Wounds without Suture.*

HOWARD LILIENTHAL (*N. Y. Med. Jour.*, Feb. 9, 1901) says that in spite of every precaution the suppuration of stitch-holes in the skin is comparatively frequent, because of the impossibility of sterilizing the



deeper layers of living human skin; the infection thus occurring may spread to the deeper layers of the wound, leading to an insecure cicatrix, with the probability of future hernia in abdominal operations. The subcuticular suture applied by passing the needle through the deeper layers of the skin, while the lips of the wound are everted, thus burying the stitches, is an improvement upon the older methods, but requires more time. Its removal in case of necessity may be a little complicated. In four years the writer has been testing the closure of wounds, in selected cases, without the use of any kind of cutaneous sutures. The deeper layers were closed in the usual way by suture materials of various kinds, absorbable and non-absorbable, but the skin was merely covered with sterilized gutta-percha tissue, and left until the healing process was well under way, when the edges were approximated with strips of india-rubber zinc plaster, 20 per cent., made by Dieterich, of Helfenberg, Germany. This plaster is adhesive, pliable and non-irritating. It was torn in strips, from an eighth to a quarter of an inch wide, which were applied at an angle with the line of the incision. Where the surface is bulging the strips may be applied at right angles to the wound. Where there are hollows or depressions the strips are placed at an oblique angle. The front and sides of the abdomen are especially adapted to this method of closure, while in the groin it is not always applicable.

The results were gratifying, the deep sutures healing whether absorbable or not. For two years past, instead of waiting until repair has begun, this method has been employed at the time of operation. The hæmorrhage is carefully checked, and the skin thoroughly dried with alcohol or ether. While an assistant approximates the edges of the wound, the strips are laid on. Where there is tension this method cannot be used. It is, however, perfectly applicable to the partial closure of wounds where drainage is employed. The strips should be removed on the sixth day, by loosening both ends and drawing them toward the wound. For three months a plaster, prepared by Johnson & Johnson, under the trade name of Sterilized Z. O. Strips, has been used. The zinc-rubber plaster is made sterile by exposing it to the fumes of formalin, in a vacuum chamber, and is placed in a sterile container, each container holding enough plaster, already cut into strips, to close an ordinary wound six inches long. This method saves time, prevents necrosis from stricture of the sutures, and is aseptic.

*Resection of the Rectum per Vaginam.*

JOHN B. MURPHY (*Phila. Med. Jour.*, Feb. 23, 1901) says that the

profession has not yet agreed upon a definite and satisfactory technique in the performance of proctectomy. The posterior operations, such as the trans-sacral and ischiorectal, have found many advocates, but they are difficult, dangerous, and in many respects ultimately unsatisfactory. The mortality in fourteen of the largest European clinics is 21.2 per cent. The perinæal proctectomy of Volkmann is applicable only to carcinoma involving the third and lower half of the second portion of the rectum. The vaginal route has heretofore rarely been the method of election. Des Quins and Norton were the first to operate by the vaginal route, and others have followed. Five cases, with the method of operation as performed by the writer, are given. With the patient in the lithotomy position, the vagina broadly dilated and the cervix drawn down, the cul-de-sac was opened by a transverse incision similar to that used in vaginal hysterectomy. Sponges were passed into the peritonæal cavity to press back the intestines. The rectovaginal septum was divided down to the rectum, by a vertical incision in the middle line, extending from the post-cervical opening and including the sphincter ani. The hæmorrhage was controlled by forceps and compresses. The posterior vaginal wall was dissected laterally from its attachments to the rectum; lateral and anterior retractors were placed in position, exposing a large field for operation. The sigmoid was brought well down, without the least difficulty. The anterior rectal wall, including the sphincter, was divided up to the lower border of the tumor, and the anal segment of the rectum separated by a complete transverse incision an inch below the lower limit of the tumor, the incision extending into the post-rectal connective tissue. The proximal end of the rectum was closed with volsellum forceps, and separated by curved scissors from its coccygeal and post-rectal attachments up to the promontory of the sacrum. The mesosigmoid was loosened sufficiently to allow the healthy portion of the bowel to come well down. The rectum was amputated above the upper border of the tumor growth, and the sigmoid and sphincteric segment united end-to-end, by silk sutures passed from within outward, the ends being left long to facilitate removal. The incision in the anterior rectal wall was closed with silk sutures, and the ends of the divided sphincter were united by buried sutures of catgut. The sponges were removed, and the peritonæum on the floor of the pelvis closed with a continuous catgut suture. The vaginal wall was sutured to the cervix, closing the transverse incision, and the vertical incision closed with silkworm-gut sutures. A rubber drainage tube, one inch in diameter, was inserted in the rectum and sutured into place. In two of the cases there was a small rectovaginal

fistula that had to be closed, but otherwise the operation was in every case a success, and the patients had control of the sphincter.

The advantages offered by the vaginal route are:

1. The sacrum and posterior bony wall of the pelvis are not disturbed.
2. The field of operation is as extensive, and the anatomical parts as accessible, as in trans-sacral operations.
3. The peritonæal cavity is opened in both operations, but in neither is it a source of danger.
4. The diseased tissue is more accessible for inspection, and the operation can be carried upward farther than in the sacral route.
5. The peritonæum can drain freely through the vagina.
6. Perfect end-to-end approximation, either by suture or the use of the button, can be secured. The former is preferable, because, as there is no peritonæum on the sphincteric segment, failure of union with the button is to be feared.
7. The sphincter is retained, and the perinæal body restored. There is diminished action of the levator ani muscle.
8. When the operation is complete, the parts are practically in their normal positions.

#### GREAT BRITAIN.

#### *The After-results in Forty Consecutive Cases of Vaginal Hysterectomy performed for Cancer of the Uterus.*

ARTHUR H. N. LEWERS (*The Lancet*, Jan. 5, 1901) says that in a certain proportion of cases of cancer of the uterus a radical operation will afford relief for a long period, even permanently in a few cases, but so long as patients do not seek advice until a late period, the proportion of recoveries will remain small. The significance of bleeding after the menopause or between menstrual periods must always be borne in mind, and it is equally important to remember that patients suffering from cancer of the uterus retain their flesh and a generally healthy aspect for a relatively long time. In the series of cases presented, there are fourteen where no recurrence has taken place since the hysterectomy. In one of these, microscopical examination of the growth proved it to have been a primary tuberculous ulceration, the clinical features of which were precisely similar to a cancerous growth of the cervix. In two other cases of large cauliflower growth, the diagnosis was not confirmed by the microscope. The intervals that have elapsed in these cases vary from two to seven

years. These cases have all been kept under observation. Four cases died soon after the operation from hæmorrhage, peritonitis, or pneumonia. In the remaining cases, recurrence took place in from one to four years. The writer considers that when four years have passed without recurrence, the probability is that the patient will have no further trouble. Previous to 1893 amputation of the cervix was his choice for cancer of the cervix, but total extirpation seems to hold more hope, and is to be preferred, even where it seems positive that the disease is confined entirely to the cervix. It is well, after the cervix has been freed, to apply Paquelin's cautery to the cut surfaces adjacent.

*Chronic Inversion of the Uterus of Seven Months' Duration successfully treated by Aveling's Repositor.*

THOMAS OLIVER (*The Lancet*, Jan. 12, 1901) reports the case of a woman who was delivered of her second child by a midwife. The labor was easy, and the placenta came away without any traction having been made upon the cord. A few hours later a large clot was passed, followed by the sudden descent of the womb and a profuse hæmorrhage. Three days later a physician was called, and an attempt was made to replace the uterus, which was inverted. After several unsuccessful efforts on successive days, the patient, who had recovered somewhat from the shock and hæmorrhage, refused further treatment. The hæmorrhage became recurrent rather than constant, and she suffered great pain. At the menstrual period the inverted uterus protruded further from the vulva than at other times. When seen by the writer, seven months after her confinement, she was thin and anæmic, but the heart, lungs, and kidneys were normal. The vaginal canal was filled with a pyriform tumor, projecting through the widely dilated os uteri. The narrowed part of the tumor could be traced up inside the os, and was continuous with all that remained of the lower segment of the uterus. No fundus could be felt above the pubes. An attempt was made to replace the uterus, with the patient anæsthetized, but only part of the organ could be replaced. An Aveling's repositor was applied, the vagina packed with iodoform gauze, and the suspenders of the instrument drawn together. The bands were tightened daily for three days, when the repositor was removed. The replacement was perfect, and there was no further trouble. The patient was kept in bed for a few days. Her general health improved rapidly and she was soon perfectly well. The steady



and continuous pressure of the repositor accomplished what forcible taxis could not do, and with little pain or inconvenience.

*Removal of Epithelioma of Cervix Uteri during Pregnancy and Vaginal Hysterectomy after Delivery.*

R. J. KINKEAD (*The Dublin Jour. of Med. Science*, Feb., 1901) reports the case of a patient admitted to the Galway Hospital, when eight months pregnant. There had been bleeding from the uterus for two months, and the attending physician had noticed a small tumor, the size of a hen's egg, attached to the anterior lip of the cervix uteri by a broad pedicle. As it was bleeding constantly, and the patient was weak and exsanguinated, it was decided to remove it at once. The tumor was very friable, and was removed by the fingers and curette, perchloride of iron was applied to the stump, and the vagina tightly packed with gauze. The packing was removed the next day; there was no further bleeding, and no uterine disturbance. The patient left the hospital in a week, and was delivered of a child by forceps a month afterward. No hæmorrhage occurred between the operation and confinement, nor was much blood lost during labor.

Two weeks after the birth of the child she was readmitted to the hospital, when it was found that the tumor had grown again larger than before. There was a slight offensive lochial discharge, but the uterus was movable, and the abdomen free from tenderness or swelling.

The vagina was irrigated three times a day with Condyl's fluid and water, and two weeks later the cancerous mass (which had rapidly increased in size) was removed, and the cut surfaces brought together with silkworm-gut. The vaginal irrigation was continued for two weeks more and then vaginal hysterectomy was performed. The woman was profoundly anæmic, the tissues of the genital passages were white, and of such low vitality that the weight of the handles of the pressure forceps on the broad ligament caused necrosis where they rested at the vaginal orifice. There was some difficulty in controlling the bleeding, but after it ceased the vagina was plugged with gauze, and the patient left in fairly good condition. Three hours later hæmorrhage set in, the plug was removed, the right broad ligament ligated, the vagina repacked, and the patient transfused with saline solution. Later in the evening there was another profuse hæmorrhage, and the patient was in a critical condition. The bleeding was found to proceed from the recto-vaginal septum, which was controlled by sutures, and from the right broad ligament, from which the ligature had slipped. This

was clamped, and the clamp left on for three days. Two weeks after the operation there was noticed a distinct fullness in the right iliac fossa, painful and tender. Three days later a discharge of pus occurred, and the patient felt better. A week later a strip of gauze was found in the abscess cavity, and removed; after this, recovery was rapid and uneventful. This gauze had evidently been pushed high up behind the right broad ligament, in attempting to control the hæmorrhage.

*Pelvic Sarcoma, with Chylous Ascites.*

ARNOLD W. W. LEA (*The Lancet*, Feb. 9, 1901) reports the case of a woman, fifty-eight years old, who, ten years before, had consulted a gynæcologist for menorrhagia, thought to be due to a fibroid of the uterus. Three years later a small lump was noticed in the right side of the abdomen, but it occasioned no discomfort for seven years, when it rapidly increased in size, and pelvic pain, irritability of the bladder, and loss of weight appeared. Examination showed the uterus to be small, pushed to the left and downward, and entirely separate from the tumor, which formed a firm, irregular mass, occupying the broad ligament, and continuous with a large, elastic tumor in the right inguinal region. Another rounded mass was felt in the right hypochondrium. On opening the peritonæal cavity about seven pints of chylous fluid, strongly resembling pus, was evacuated. It had evidently been encysted between peritonæal adhesions. The uterus and appendages were normal, and the left side of the pelvis free from any growth. The mass on the right had developed between the layers of the broad ligament, and filled the right side of the pelvis and iliac fossa, extending upward, with numerous irregularities and several large, projecting masses. The tumors were deep red, with large vessels on their surfaces. The small intestines were displaced and matted together. The peritonæum was closely adherent to the surface of the tumor. It was impossible to remove the growth, and, after flushing the abdomen with saline solutions, an india rubber drainage-tube was inserted, which remained in place for six days. There was little discharge, and no accumulation of fluid after the removal of the tube. Four years and a half have elapsed since the operation, during which time the woman's health has been good. Masses can still be felt on examination, but they are smaller. The fluid showed, under the microscope, a granular basis of emulsified fat, with a few leucocytes and red blood corpuscles. The primary growth was probably a fibromyoma of

the broad ligament, not becoming malignant for several years. The chylous ascites was probably due to a chronic adhesive peritonitis, resulting from the irritation of the tumor, and producing obstruction of the lacteals. It is evident that the operation in some way inhibited the further development of the tumor, though it is, of course, possible that renewed activity may develop in the growth later on.

---

## OBSTETRICS.

### UNITED STATES.

#### *Laryngologic Aspects of Pregnancy.*

EDWARD T. DICKERMAN (*Obstetrics*, January, 1901) says that pathological conditions of the larynx do not particularly influence pregnancy. In one case in which it was necessary to do a tracheotomy for œdema of the larynx, the patient aborted immediately after the operation, but this accident was more probably due to the operative procedure than to the condition of the larynx. Early in pregnancy some women complain of a nasal obstruction due to turgescence of the erectile tissue in the nose. The condition usually subsides in the sixth or seventh month, and practically nothing can be done to afford permanent relief. During pregnancy there is a lowering of the voice, due to interference with free chest expansion, but there is no permanent influence upon the voice.

Tertiary syphilitic lesions of the larynx and pharynx are almost invariably retarded during pregnancy, and the conditions will remain practically dormant for two or three months after parturition, when they start up with fresh vigor, and the tissues rapidly break down.

#### *Removal of a Child's Head by Abdominal Section.*

J. A. WALKER (*Amer. Jour. of Surg. and Gyn.*, January, 1901) was called in consultation to a confinement case, and requested to come "prepared for an operation." On arrival, it was found that the patient had been in labor sixty hours, the child was dead, and its body had been delivered as far as the head. The woman was a rachitic

dwarf, the anteroposterior diameter of the superior strait being only  $2\frac{1}{2}$  inches. The body of the child was removed by amputation at the last cervical vertebra. An attempt was made to crush the head, or to perforate, but without success. The foetal skull was extremely hard. The patient's home was a log house, with cracks open, all conditions were most unsanitary, and the patient was exhausted, but preparations were made for an abdominal section, which was at once performed. The abdominal walls were very thin, and the peritonæum was divided at the first incision. The uterus was lifted out of the incision, wrapped in a bichloride towel, and incised. The head and the already detached secundines were removed, the uterus washed out with hot salt solution, the incision closed with silk sutures, and the uterus returned to the abdominal cavity, the incision in which was closed in the usual way, but omitting one stitch at the lower angle of the wound for drainage. The temperature never rose above  $99.5^{\circ}$ , and recovery was speedy. The writer adds that the only thing worthy of note in the later history is that the bill was very hard to collect.

### *The Teeth in Pregnancy.*

E. S. TALBOT (*Obstetrics*, January, 1901) says that decay and pain in the teeth is a most frequent complication of pregnancy. The teeth become sensitive and soft, indicating that they are deprived of their lime salts. This is due probably to the perverted function of the excretory organs, the effete matter not eliminated causing auto-intoxication. The alveolar process is usually most affected. Interstitial gingivitis is a common condition during pregnancy. The gums become inflamed, puffed, elongated and bleed easily, the alveolar process next becomes involved, and becomes more or less absorbed, leaving the necks of the teeth quite exposed. Later, the teeth may loosen and drop out. Some patients suffer intense pain in the teeth, which is not due to any local condition, and must be considered reflex from the stomach or uterus.

Most women could take gas and have teeth extracted during pregnancy, with perfect safety, but in women of a very nervous temperament abortion has been known to follow the extraction of teeth. Early in pregnancy the woman should have her teeth put in the best possible order, and after that extreme cleanliness of the mouth and teeth must be insisted upon. An antiseptic mouth wash should be used after each meal, and the gums and alveolar process should be stimulated by the daily use of a gum massage brush.



*Neurological Aspects of Pregnancy.*

D. R. BROWER (*Obstetrics*, January, 1901) says that when the changes that occur in the heart, in the blood and in the direction of the nervous force during pregnancy are taken into consideration it is surprising that serious neuroses are not more common. Without touching upon the mental status the first nervous manifestations are usually nausea and vomiting. The fact that these conditions are best controlled by tonics and sedatives indicates their nervous origin, as a rule.

Neuralgia of the uterus often appears early in pregnancy in neurasthenic patients, and is best relieved by such remedies as acetanilid, codeine, cannabis indica, zinc phosphate and rest. Chorea of pregnancy is a most serious neurological symptom, and has, in the the writer's experience, resulted fatally. Full doses of arsenic are the best treatment, and when this alone fails, chloral and morphine, or trional, should be given in addition. A case recently seen in consultation developed the *grand mal* type of epilepsy about the middle of pregnancy. The convulsions were truly epileptic in character, and there was no history of *petit mal*, but there had been convulsive attacks during teething in infancy. The urine was normal. Multiple neuritis or any neuritis of pregnancy is undoubtedly due to auto-intoxication, and is best managed by alteratives, tonics, and eliminatives, with electricity and massage. Dermato-neurotic effects, such as pruritus, urticaria, erythemas and herpetic conditions, are due to nutritional changes. Hysteria is of frequent occurrence in pregnant women, but there is usually a history of previous hysterical attacks, and pregnancy is merely an additional factor in their development.

*Ophthalmologic Aspects of Pregnancy.*

CASEY A. WOOD (*Obstetrics*, January, 1901) says that certain eye diseases may be, and usually are, aggravated by the changes that occur during gestation, and others may be due to pathologic conditions concurrent with pregnancy; there are a few ocular states, however, that are probably due directly to gestation. The most frequent is the asthenopia arising from oculo-muscular weakness, both of the accomodative and of the extrinsic muscular type. The symptoms are headache, eye pain, photophobia and difficulty in doing near work. The completion of pregnancy may relieve all these symptoms, but sometimes they mark the beginning of eye defects that persist through life. Pigmentation of the eyelids is a fairly frequent accompaniment of pregnancy. Swell-

ing of the lower lids is often one of the first indications of albuminuria in pregnancy, and should always lead to an examination of the urine. Hysterical amblyopia may occur, even complete blindness may be the outcome of gestation. Profuse lachrymation or epiphora has been noted in conjunction with salivation and extreme nausea. Violent and long-continued vomiting may induce hæmorrhages into various parts of the eye; while these are occasionally serious they are usually subconjunctival, and are not followed by blindness. Detachment of the retina may occur, partially due to vomiting in cases predisposed to it, and partially to the albuminuric retinitis occasionally seen during gestation.

The most serious effects of gestation upon the eye are the production of albuminuric retinitis and the amaurosis of uræmia. The prognosis depends upon the character of the uræmia; if it is temporary, terminating with the completion of pregnancy, the eyesight may be restored, although the induction of premature labor and the relief of the albuminuria does not always save the sight.

*Fifty-eight Cases of Puerperal Eclampsia, without Mortality.*

W. STROGANOFF (*Obstetrics*, February, 1901) says that his present views in regard to eclampsia date from 1897, at which time he modified and changed his treatment, with the result that of fifty-eight cases of puerperal eclampsia treated since that time, all have recovered. His views may be stated briefly as follows: Puerperal eclampsia is an acute infectious disease, usually running its course in a few hours, rarely exceeding twenty-four, and still more rarely forty-eight hours in duration. In most cases the convulsions constitute the greatest danger from their effect upon the heart, the respiratory center, the kidneys and general condition. They may cause cerebral apoplexy and death in the fœtus before delivery. If the convulsions can be stopped, or their intensity diminished, the resisting power of the patient's organism will usually suffice to nullify the effect of the offending germs. Therefore, the prevention or amelioration of the convulsions is the main object of treatment. The following plan of treatment has been found most efficacious: (1) The lessening the irritability of the nervous system by medication, and by the removal of every external source of irritation, especially in connection with the birth canal. (2) The strengthening of the cardiac and pulmonary circulation; the securing of a large amount of oxygen; and the institution of prompt delivery if these measures and a proper diet do not result in the cessation of convulsions.

During convulsions the patient suffers from asphyxia, respiration is almost suppressed, and the organism demands oxygen. This should be administered continuously in the place of chloroform, so commonly used. Chloroform in convulsions of the ordinary type is not only useless, but injurious. So little chloroform is inspired during a convulsion that anæsthesia is not induced, and the entrance of oxygen is hindered. In exceptional cases, where the convulsion lasts from three to five minutes, and respiration is unimpeded, chloroform could be used. During the administration of oxygen the patient must be watched to prevent biting the tongue or other injuries; mucus should be removed from the mouth, the nose cleansed, all weight or constriction upon the thorax must be avoided; the patient, if comatose, should be turned from her back to her side occasionally; the room must be well ventilated, and kept perfectly quiet. When vaginal examination, catheterization or disinfection of the birth canal is necessary, chloroform anæsthesia should be employed to avoid renewed irritation and the recurrence of convulsive attacks.

In addition to this, morphia muriate and chloral hydrate were employed. As soon as the first convulsion occurs about  $\frac{1}{4}$  gr. morphia muriate should be given hypodermically, and the dose repeated in one hour, except in cases of great severity, when the interval should be shortened. After the second injection of morphia, from  $22\frac{1}{2}$  to  $37\frac{1}{2}$  grs. of chloral hydrate may be given, by mouth if the patient is conscious, otherwise by rectum. Without reference to the cessation of convulsions light narcosis should be maintained by chloral and morphia for twenty-four hours, and if the patient is restless or unconscious for twenty-four hours more. The combination of these two remedies, possesses marked advantages over either alone. Large doses of morphia are not without great disadvantages; they weaken the respiratory center, suppress oxidation processes, diminish the vital capacity of the cells, and are more likely to be of toxic effect, while better results may be obtained by the repeated use of small or moderate doses.

Hot baths, and, to a certain extent, also moist warm wrappings, do more harm than good, the former increasing the irritability of the nervous system, and the latter depressing the heart. The wrappings are an actual obstruction to respiration and circulation. One warm bath for cleansing purposes may be given where the skin is dirty. Venesection was not used in a single instance. In one case of beginning pulmonary œdema dry cups were applied to the chest with good effect. A milk diet is best, but where this was distasteful weak tea was allowed, and where the kidneys were not markedly affected, a tea-

spoonful of brandy was added with good effect. Where the patient is unconscious, milk and normal salt solution may be given by rectum. In heart weakness, after repeated attacks, tincture of musk and sulphuric ether are indicated.

The second cardinal point is the delivery of the foetus. In 50 to 60 per cent. of cases convulsions cease with delivery, or only one or two more are noted. Operative delivery was undertaken whenever it could be done without injury to the mother or child. Where there was but little dilatation of the os the colporhynteur was introduced into the lower uterine segment, and uninterrupted traction made. In other cases delivery was postponed and, as under the above treatment, the attacks almost always ceased, operative interference was unnecessary.

*Irreducible Incarcerated Retroflexed Gravid Uterus.*

WILLIAM A. QUINN (*Obstetrics*, February, 1901) says that the pregnant uterus may become retroflexed from great laxity of the uterine ligaments, and incarcerated by adhesions formed before conception takes place, or by the cervix pressing against the pubic arch, thus lifting the bladder out of the pelvis, elongating the urethra, and preventing perfect evacuation of urine, when the distended bladder will tend to force the fundus down under the promontory of the sacrum. The softening of the lower segment of the uterus during gestation lessens its self-support and resistance, reducing its ability to rise out of the pelvis and correct its position. Another important factor is unrepaired former injuries of the pelvic floor.

If the condition is recognized by or before the end of the third month, and if adhesions and other complications are absent, reposition may often be accomplished by thoroughly evacuating the bladder and bowels, and placing the patient in the knee-chest position. If this fails, it may be replaced under an anæsthetic. If this fails at that early period, or if the pregnancy has proceeded beyond three months, the most conservative method, as well as the most scientific, is to open the abdomen and lift the fundus into place. If the uterus is large enough to completely fill the pelvis, efforts at vaginal replacement will fail, not because the uterus is too large to be forced through the pelvic brim, but because, when it is pushed up, nothing can enter from above to take its place, and when pressure is withdrawn from below the atmospheric pressure from above quickly forces it back to its former position. Where there are adhesions abdominal section affords the only hope of relief.



A case is reported to which the writer was called in consultation. The attending physician had made every effort under anæsthesia to replace the hard, unyielding mass which completely filled the pelvic cavity. The perinæum having been torn in a previous labor, the mass pressed low down on the pelvic floor. An enormously distended bladder reaching 2 inches above the umbilicus was emptied with much difficulty by a catheter. The rectum was pushed against the sacrum until only ribbon-like fæces could escape. Abdominal section was performed, and the uterus found in extreme retroflexion. The tissues were so softened and vascular that they broke down under the hand as the uterus was lifted out of the pelvis. It was evident that complete extirpation of the uterus promised the only hope of a good result. There was much hæmorrhage, as the ligatures repeatedly cut through the softened tissues, but sound tissue was finally reached, and the bleeding controlled. The patient had been having a low grade of fever for two weeks, and this continued for two weeks more, delaying recovery, but in six weeks she was able to return home and resume her household duties.

The uterus was found to contain a fœtus, whose development appeared to have been arrested at the fifth or sixth month of foetal life.

#### *Pregnancy in Typhoid.*

G. H. B. TERRY (*Med. News*, Feb. 16, 1901) reports the case of a woman who was attacked with typhoid fever during the fourth month of her third pregnancy. The fever was not above 104° F. at any time, and the disease pursued its usual course, the patient convalescing in the fourth week. A little more than five months afterwards the patient gave birth to healthy, vigorous twin girls. The case is interesting as proving that typhoid does not necessarily interfere with the favorable termination of pregnancy.

#### *Abdominal, Vaginal and Pelvic Examinations before Labor.*

J. A. PAGE (*Massachusetts Med. Jour.*, March, 1901) points out the advantages of thorough and complete examinations of the pregnant woman as a means not only of diagnosis but of prognosis. An appreciation of the conditions present may enable the accoucheur to prevent many difficulties and dangers, and prepare him to meet momentous emergencies.

In examinations made before the fourth month both internal and external palpation are desirable. The study of the alternate contractions and relaxations of the gravid uterus affords a means of recognizing several abdominal conditions. In cases of fibroma associated with pregnancy careful observation of the uterine contractions will generally enable one to locate the portion occupied by the tumor. In the differential diagnosis between pregnancy and ovarian tumor this sign is also of value, and where the two conditions co-exist the uterus may be readily recognized by the alterations in its state of resistance. In cases of mole pregnancy, of the solid kind, there will often be a rigid contraction lasting for several days. Percussion and palpation of the abdomen, together with examination of the blood, will distinguish between anæmia attended with œdema gravidarum, and leukæmia, the liver and spleen usually being enlarged in the latter condition. Where the abdominal muscles are weak and relaxed, uterine inertia, tedious labor and possible post-partum hæmorrhage may be confidently predicted unless the general muscular system can be toned up. An over-sensitive vulva, vagina and os uteri may retard labor by causing reflex spasm of the os uteri. Ascites, hydramnios, placenta prævia, malignant and inflammatory conditions of the vagina, uterus or appendages, obstructions due either to the soft parts or bony pelvis, may all be recognized by systematic examination, and proper steps can be taken to save the life of both mother and child. Where Cæsarean section is demanded by contracted pelvis, obstructing tumors or malignant disease of the os, both accoucheur and patient may be ready for the operation as soon as labor begins.

Large concretions in the bladder may seriously complicate labor, and where there are any symptoms of calculi the matter should be investigated promptly.

As obliquity of the uterus sometimes interferes with labor, some form of abdominal supporter should be worn to correct the difficulty.

Not to be aware of the probable conditions awaiting him in any given case of labor will often bring the attendant face to face with appalling and unprovided for emergencies.

*The Axis-traction Forceps, with Special Reference to Rotary Axis-Traction in the Treatment of Posterior Positions of the Anatomical Head.*

SIMON MARX (*New York Med. Jour.*, March 2, 1901) believes that when the mechanism of the axis-traction forceps is understood, and

it has once been successfully employed, no accoucheur would use any other forceps. The greater expense is fully compensated for by the saving in muscular energy, and the diminished risk to mother and child. The difficulty in obtaining a sufficiently long receptacle for the sterilization of the forceps can be easily overcome by using a baby's tin bathtub. There is no greater difficulty in the application of the blades themselves, and the attachment of the traction rods is soon mastered by experience. With one unskilled in the use of this forceps the danger of slipping is great, but by careful attention to the instructions given the danger may be reduced to a minimum. The fixation screw was formerly considered necessary to keep the blades in place, and with this in action pressure necrosis at the points of application of the blades too often occurred on the foetal head. But it has been amply demonstrated that the impact of the foetal head and the pelvic wall will hold the blades in position, and that the screw is of no value whatever. The proper axis-traction forceps are the modern Tarnier or Jewett, without the perineal curve.

The great advantage in using axis traction is the free mobility of the forceps when applied to the head. The handles are used to act as an ordinary index to the position of the head, and to the direction in which traction should be exerted. The extraction force applied to the cross bar of the traction rods drags the head uninfluenced through the pelvis, and rotation can, and does, occur in the majority of cases.

The advantage to the child is great. The compression force applied to the foetal skull by forceps is estimated at about twenty-five pounds, and with ordinary forceps every pound of increased traction force adds half a pound of compression weight. With axis-traction forceps no pressure is brought to bear upon the head, the extraction force being applied directly to and from the cross-rods. The saving to the operator of strength is an important item, it being marvellous with what ease difficult cases are delivered. Moreover, there is no uncertainty as to the right axis in which to exercise traction.

As to indications for the use of this forceps, the ordinary rules hold good, the same method of application also applies with the addition of the attachment of the traction rods. Except where "rotary axis traction" is necessary, the forceps is applied to the sides of the pelvis. It must be remembered that with ordinary forceps, especially if the head be high, the handles look much farther backward than when the axis-traction forceps is used. One not accustomed to the latter instinctively takes hold of the cross-bars without looking at the direction of the handles, and pulls directly backward, with the

result that the handles will fly upward and away from the traction rods, and the operator will find an empty forceps in his hand outside of the vagina, and probably a completely split recto-vaginal septum. *The handles must always be the guide as to the direction of traction, no matter what their position.* This is the secret of success. The button on the traction handle, or the point of junction of traction rods, must always be nearly in contact with the traction handle, just barely touching, and this relation must be maintained until the child is practically extracted.

In the majority of occipito-posterior or mento-posterior positions, spontaneous rotation occurs; yet, in spite of all efforts at correction, including manual rectification, forcible flexion or extension of the head, postural treatment, and forced instrumental rotation, which is risky, occasionally proper rotation does not occur, and a disagreeable, if not positively dangerous, complication presents. In many cases with the axis-traction forceps the head may be rotated anteriorly by simply making traction, when the resistance of the perineal structures and the turning points afforded by the ischial spines will provoke natural rotation when the head descends to the pelvic floor. It is instantly indicated by the behavior of the blades, rotating with the head, the movement increasing with traction, until the forceps has entirely rotated and placed itself inversely, as Pajot believes in applying them in posterior cases. They are then removed and reapplied.

Occasionally no such tendency to rotation occurs, and here "rotary axis traction" must be used. The forceps are best applied obliquely, *i. e.*, to the sides of the fetal head. They then conform to one of the oblique diameters of the pelvis, insure a certain purchase and aid in rotation. With the right hand steady traction is made, while with the left the handles of the forceps are influenced by gentle rotation to turn in the direction of the presenting part, to the left in left posterior cases and *vice versa*. This applies equally in face cases, taking the chin as the analogue of the occiput. The greatest gentleness must be used, and the careful traction and slow rotation so timed that when the head reaches the pelvic outlet complete rotation shall have occurred. Forcible rotation with ordinary forceps may succeed in these cases, but with resulting deep lesions in the vagina and pelvic floor, while under the above manipulations the lesions are no more frequent or serious than in ordinary simple forceps extraction.

*A Series of Ten Successful Cases of Cæsarian Section.*

W. J. SINCLAIR (*The Lancet*, Jan. 19, 1901) reports in detail



ten cases of the above operation, all of the mothers and children having lived. The first case was a patient suffering from osteomalacia, who had given birth to eight children before. The first six pregnancies were normal, but the last three have been instrumental, the last being very difficult, and resulting in the birth of a dead child. She was admitted into the hospital in labor, and Cæsarian section performed a few hours later. The uterus, tubes, and ovaries were removed on account of her osteomalacia. The second case was a dwarf, primipara, with extremely contracted pelvis. She entered the hospital in labor, and a Cæsarian section (Porro's operation) was performed. The patient and child both lived, although the child was syphilitic. The third case was admitted to the hospital in labor with her second child. Her first child had been delivered at term, after craniotomy. The pelvis was contracted. As the patient was anxious to have more children, the uterus was not removed. She has since been pregnant, and talked cheerfully of a second operation, but miscarried at the third or fourth month. The fourth case was a woman with contracted pelvis, who had had one child delivered after craniotomy. The uterus was amputated by the intra-peritonæal flap method. In these three cases of removal of the uterus, no milk ever appeared in the breasts. The fifth case was a primiparæ, extremely deformed, the left hip being ankylosed, and the left thigh flexed upward and inward, pressing upon the abdomen. There was extreme lordosis. The abdominal incision had to be made very high up on account of the position of the left leg. The child was large and vigorous. The sixth case was a primipara, with full-term pregnancy, complicated by a solid ovarian tumor in the lower part of the pelvis. Cæsarian section and ovariectomy were performed on the day of admission into the hospital, she being in the first stage of labor. The seventh patient was much undersized, but not deformed. She had previously been delivered of a dead child. The pelvis was so small that Cæsarian section was advised and performed with speedy recovery. The eighth case had been delivered, after craniotomy, of two children. Being anxious to have a living child, she requested Cæsarian section, which was performed at full term as soon as labor began. The ninth case was a rhachitic dwarf, who had previously had two dead children, craniotomy having been performed upon the last. The tenth case had a very contracted pelvis, and had craniotomy performed five times. Cæsarian section was performed at term, without waiting for the onset of labor.

In the majority of cases there is no choice as to the time of opera-

tion, the patient waiting until labor has set in before deciding upon an operation; but in the last case the date was fixed and the operation planned, as in any case of abdominal section for a tumor. There was no trouble from failure of the uterus to contract, and another objection, that the os will not be sufficiently dilated, the writer believes to be groundless.

The incision of the uterus was always postponed until the uterus could be drawn forward out of the abdominal wound, and an elastic tube placed around it, but this is not to be drawn tight (if it ever is) until after the placenta and membranes are removed. If the deep sutures are quickly inserted and tied pretty tightly, the hæmorrhage, after relaxing the tube, is slight. As to the size of the wound, it should be large enough to permit of the rapid extraction of the foetus, without laceration of the wall of the uterus; an added half inch or so of a clean incision is a small matter compared with laceration of the uterus or asphyxia of the foetus. In the writer's opinion, little or nothing can be said in favor of Fritsch's method, *vis.*: a transverse incision through the fundus of the uterus, for the suture knots must come in contact with the bowels and omentum, resulting in adhesions. But the greatest danger is the possible adhesion of the fundus uteri to the parietal peritonæum before it has undergone involution, resulting in consequent dragging upon the high area of adhesion. When the uterine incision is made in the front median line, as involution goes on the uterine wound sinks down and comes in contact with the abdominal wound, so that the uterus is ultimately in exactly the same position as after a successful ventrofixation operation, making a future pregnancy and parturition possible. In view of the increasingly favorable statistics of Cæsarian section, the premature induction of labor should be classed with craniotomy, and very exceptional conditions must be present to allow of its justification.

*Impacted and Displaced Gravid Uterus, with Fibroid.*

NEIL MACLEOD (*The British Med. Jour.*, Jan. 19, 1901) says that the prolongation of gestation to term, where the uterus is retroverted and impacted, is very unusual, abortion usually occurring where replacement of the uterus is not performed at an early period. The case reported was of a multipara, whose last confinement had occurred eleven years before. She had suffered from retroversion since that time. During the early part of this last pregnancy she suffered from boils and severe malarial attacks, and during the first

two months from pain and hæmorrhages. After the fifth month she felt very well, and no vaginal examination was made until the writer was called at full term, as she was suffering from diarrhœa and periodic pains, which she located in the rectum. Examination revealed no os, but the head could be felt low in the pelvic cavity in Douglas' pouch. It was evident that natural delivery could not occur, and the patient was anæsthetized and prepared for operation. The os was found about three inches above the pubes, and it was possible to dilate the external os very slightly. Repeated ineffectual efforts were made, with the hand in the rectum, combined with external manipulation, to raise the uterus. A median abdominal incision was made, into which the empty bladder immediately projected, and behind and through it the os uteri could be felt. The omentum was adherent to the anterior wall, and after its separation another attempt was made to improve the position of the uterus, but without avail. The uterus was therefore incised, the hand passed through the presenting placenta, and the child extracted. Damage had been done to the child's nose and one parietal bone by the previous manipulations, and it lived only a few hours. The placenta was densely adherent, and had to be peeled off in pieces. The descending colon and the small intestines were adherent, and a piece of the uterine wall was excised and left attached to the bowel. On the anterior uterine wall was a fibroid the size of a man's fist. The uterine adhesions were so dense that it was impossible to separate them or to distinguish the adjacent tissues. The anterior half of the uterus, including the placental site and the fibroid, was removed, after being included in a loop of sterilized cord. The abdominal wall was sutured. There was a good recovery. There was no return of menstruation, and the patient's health was good.

*Indentations in the Skulls of the Newborn.*

J. M. GELL (*British Med. Jour.*, Feb. 9, 1901) in connection with the paper of Dr. Kerr's on this subject, wishes to report two cases occurring in patients with slightly contracted pelves, and rather sharp sacral promontory. The indentation in each case was in the frontal bone. One child presented some brain symptoms of pressure. Pressure on the head had no effect, and in both cases an incision was made through the scalp and a director was passed through the fontanelle, between the dura and the skull, when slight pressure sufficed to restore the indentation perfectly. Both children did well.

## ITEM OF INTEREST.

## EMERGENCY HOSPITAL AT THE PAN-AMERICAN EXPOSITION.

*How Visitors will be taken Care of when They fall Ill.*

A very pretty hospital building stands near the west end of the Mall. Floor area rather than elevation is a prominent feature in its construction, and utility, though the prime consideration in its design, has not been left unadorned. The building is freely of the style of the Spanish renaissance and resembles in general appearance the old Spanish missions. The main wing has a frontage of ninety feet on the Mall, and a depth of thirty-eight feet; it is but one story high except in the center, where it takes the form of a square tower of two stories



surmounted with two flagstaffs, from one of which waves the Exposition flag and from the other the only universal international emblem, the Red Cross banner. A rear wing, one story in height and thirty-two feet wide, runs back from the central portion for a distance of fifty-six feet. Here, as elsewhere in the Exposition, color adds its charm to the antique construction, and it would be easy to imagine in this building, covered with heavy red tiling, a low wandering adobe mission-house of the past. Any illusion of antiquity, however, is at once dispelled by a visit to the interior. Modern arrangements, both



convenient and sanitary, mark every feature. Approved medical and surgical appliances have been selected with especial regard to emergency work and to such exigencies as are likely to arise. The main entrance opens directly into a rotunda decorated with tropical plants, suitable pictures, drapery, etc. It is lighted from above and encircled by a round gallery, opening through the upper story. At the farther left-hand corner the main office is situated under the staircase, forming an irregular alcove. It contains telephone, electric annunciator, messenger call service, etc. The first floor of the hospital contains, in the extreme western wing, two male wards with seven cots each, bathroom, physician's office, morgue and linen chest. The eastern wing contains a women's ward, large enough for a dozen cots, bathroom, office for the superintendent of nurses, physician's private office, linen closet, etc. The upper story is intended for the use of the resident physician and the necessary attendants. The rear wing contains the operating room, sterilizing department and instrument cases. Immediately across the hall is the emergency bathroom and patients' waiting room. Farther down the corridor is located the kitchen, pantry and patients' dining-room. In the extreme southern end of this wing is the storage room for the electrical ambulance and a station for recharging the batteries. In addition to the two electrical ambulances, a steam or gasoline motor ambulance will be provided, to be ready in case of failure of the electric current. Water, gas and electricity are carried to every part of the building; the cooking and heating are done by natural gas. The building is plastered throughout and, so far as possible, is rendered sanitary and germ proof. Dr. Roswell Park is the director; Dr. Vertner Kenerson, deputy director, and Dr. Alexander Allen, resident physician.

In regard to the importance of this adjunct to the Exposition, it may be said that up to the 1st of March 504 cases have been treated on the grounds, only one of which proved fatal. These include all forms of sickness and accidents to workmen. In this connection it is well to note that the number of cases treated at the Omaha Exposition was about 3,000, while the history of the hospital at the World's Fair in Chicago gives a total of 11,602 medical and surgical cases treated, resulting in sixty-nine deaths. It is hoped that there will be less use than this for the hospital at the Pan-American Exposition, though of the immense crowds that will attend no doubt many individuals will have occasion to appreciate the provision that has been made in this direction.

THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

---

MAY, 1901.

---

CHRONIC APPENDICITIS.\*

BY WILLIS E. FORD, M.D., UTICA, N. Y.

I want to speak of the results of appendicitis, in those cases in which no operation has been done, and an apparent recovery has taken place. The term "chronic appendicitis" could not be used if it was not assumed that every case of appendicitis left some trace of its ravages in the abdominal cavity. Every attack of appendicitis must be an acute one. It may be recurrent, the acute symptoms subsiding, and then re-appearing later on. I should think the term "chronic appendicitis" would be misleading, if used to indicate a low grade of continuous inflammation of any sort, but I know of no better term to describe the condition of which I wish to speak than "chronic appendicitis." While a chronic ailment, it is not necessarily a continuously inflammatory one. I was of the opinion, until I had removed many apparently healthy appendices, that the symptoms of chronic appendicitis, as described in books, were due, either to an adhesion of the appendix to some adjacent structure, or to some sensitive condition of the organ itself, caused by changes in its wall or canal by reason of an inflammatory process. It is easy enough to say, if we accept the theory of those who claim that the appendix, when carefully examined after recurrent appendicitis, always shows such changes as justify an operation, that the appendix alone is at fault; yet, it is difficult to see how these pathological changes, which have been so often described as confined to the appendix, can give rise to the pain, intestinal indigestion, and loss of strength, which bring many persons to half invalidism.

It has not been shown conclusively that these same changes, or

---

\* Read before the Utica Medical Library Association, April 8, 1901.

similar changes, cannot be found in any autopsy room in people who have never had any symptoms of appendicitis, intestinal obstruction, or peritonitis. It would be singular if this rudimentary organ followed strictly the law which governs other organs more actively engaged in carrying on the processes of organic life. These neglected rudimentary organs, like the male breast, the tonsils, and the appendix, need not necessarily be anatomically correct in order to give perfect health to a person. It seems to me that it is assuming altogether too much to say that an appendix which is not adherent, and not in a state of inflammation, and not septic in its inner coat, but when removed and split open, shows some little scar in its mucous coat, or slight stricture, or even occlusion, with nothing below the occluded spot that is septic or inflammatory, should necessarily produce symptoms of sickness, simply because there has been a history of previous catarrhal appendicitis.

Last year my attention was called to this by several interval operations for appendicitis within a few months, in which the appendix seemed normal. One of the first of these cases was in a young married woman, a patient of Dr. Van Wagner, of New Berlin, who had just recovered from a second sharp attack of typical appendicitis. About a month before this she had had a very severe and serious sickness, due to appendicitis, but had refused operation at the time, and her condition had caused her physician great anxiety. It subsided, and suddenly returned, in about a month, and the second attack lasted a week, at the end of which time I operated. The appendix was not adherent nor inflammatory; it was not thickened, was natural in appearance, and the meso-appendix was normal, and after removal the canal of the appendix was also found to be normal and without pus. From the cæcum, and extending upwards for four inches, the intestine was adherent to adjacent structures, this plastic material sticking the omentum fast and extending to the adjacent coil of small intestines. These adhesions were easily separated, and the wound dried and closed. The bowels were kept in a state of active peristalsis for some days, and the recovery was immediate and permanent.

About the same time, a young countryman, a patient of Dr. Hand, was operated, who had had four or five attacks of appendicitis during a period of six months. He had been unable to work because of pain when standing, and his general health had begun to give way. He was very tall, and his appendix was proportionately long—about eight inches—and, like the other case, without evidence of anything wrong with it, but with the same adhesions going up the gut, though the ad-

hesions were more firm and were released with considerable trouble, so that the operation, altogether, was quite a serious one. The restoration to health, however, was almost immediate. Several other cases gave similar histories, and the operations disclosed omental and peritonæal adhesions without pus in the appendix.

Within a few weeks a patient, from the northern part of the State, and also young, came in, with a history of serious peritonitis, occurring six years before, in which his life had been despaired of, and after his apparent recovery there had been a dragging sensation in the side, amounting often to soreness, and a recurrence every three or four months of colic, with symptoms of obstruction, and pain referable to the region of the appendix, and some inflammatory symptoms—and, in short, a general history of recurrent appendicitis. In this operation the appendix could not be found, and, after the very dense adhesions which constituted the disability had been dissected, and the colon lifted out of the wound and turned over, so as to be sure that the appendix was not adherent posteriorly, the conclusion was reached that the original inflammation had amputated the appendix, and that the dense adhesions which followed had caused his disability. There was no evidence of pus.

During the same time another case, somewhat similar to this in its history, was found to have an appendix that had evidently been perforated and was adherent over the end of the cæcum, though there was no evidence of any pathological change in it at the time of operation. The adhesions again extended up the gut, and included some of the small intestine, which accounted for the disability. It would be easy enough to give histories of many similar cases. The point is, the disability is due to partial intestinal obstruction, and the appendix, having been the original cause of the disease, in most instances at least, has ceased to be an important factor. Of course, many cases of recurrent appendicitis go on to perforation or to abscess conditions, and, unless operated, cause death. It is not of these cases we are speaking, but of catarrhal appendicitis, and chiefly of its results. If these cases of catarrhal appendicitis could be prevented from giving the adhesions, it is probable that more recoveries that are real would occur, and there would be fewer apparent recoveries, with relapses and serious symptoms later.

I have never seen pus cases where a simple abscess is found and drained, whether the appendix was removed or not, that give any trouble afterwards. Sometimes a hernia, of course, follows, but not the symptoms of recurrent or chronic appendicitis, of which I have been



speaking. On the other hand, where the appendix is perforated, not being walled-off, as in the fulminating type, septic peritonitis follows. If operated and recovery occurs, a disturbance amounting to partial or complete obstruction frequently takes place, due to the bands of adhesions, forming in various parts of the abdominal cavity. Two months after an operation of this kind, where the pelvis was full of offensive fluid, with peritonitis and stercoraceous vomiting, I had to open the abdomen a second time in the median line, for almost complete obstruction, and released the coils of the small intestine on the left side of the body, which were closely bound down by dense adhesions. This man has never been perfectly comfortable and well since.

I do not think it is true that all cases of intestinal obstruction, caused by bands of adhesions, which close off the lumen of the gut, are due to attacks of appendicitis. I have, myself, within the past two years, operated three such cases of total obstruction, in all of which there was stercoraceous vomiting and absence of gas per rectum for days previous to the operation, in which there was no history of anything that simulated appendicitis. Two of these cases were under the observation of as good a man as Dr. William Baker Crain, of Richfield Springs, and the other was a patient of Dr. Casey, of Mohawk. The intestines were totally occluded by such firm bands that extensive dissection was necessary to release them, and in no case was there any trouble in the region of the appendix or the head of the colon, or even on that side of the body. In two other cases the ascending colon was caught by a single firm loop and suspended, thus producing complete strangulation, without any history or any evidence of trouble about the head of the colon. Again, obstruction of the bowels has occurred lately in two instances, caused by inflammatory trouble about the gall-bladder, both of which cases recovered as soon as the adhesions which strangulated the gut were removed.

I cannot, therefore, go so far as to say that all of the troubles of this nature, within the abdominal cavity, must necessarily come from the appendix. If we can locate the spot where the local peritonitis has caused the adhesions, without the formation of pus, whether it be from so-called appendicitis or not, deep massage, or galvanism, or both, ought to be given to prevent firm adhesions.

Where no operation is permitted, the after-treatment of catarrhal appendicitis, it seems to me, is very important, if we want to avoid obstruction of the bowels, caused by the retraction of adhesive bands. If the intestines are kept full of some pulpy food, the type of which is boiled rice, and if massage or galvanism, or both, are used with

persistence for a few weeks, these adhesions may be removed, or so stretched as to produce no after-results. I have done this repeatedly, and have seen the patient remain well for a long period, and up to the present time I have never had to operate a case later where this has been done thoroughly.

When the salines have been administered in catarrhal appendicitis, and the bowels have been thoroughly emptied, I think it quite customary to give but little food, and to relieve the soreness, which follows immediately after, by opiates. This allows the intestines to remain quiet long enough for the adhesions to firmly fix some portions of them, so that future trouble may be expected. Would it not be better either to operate every case of this sort at once, removing the adhesions and flushing the abdomen with saline solutions, then keeping up the peristaltic movement by means of simple foods and Seidlitz powders? Or, if the operation is declined, to insist that the intestines be kept filled, and that gentle massage be used. In serious cases, a current of galvanism of sufficient strength may be passed through the seat of the injury to release the adhesions, as is done effectually in certain cases about the adnexa of women.

This brings us to the operation itself. As before intimated, the opening of an appendicial abscess, followed by thorough drainage, leaves the patient well. I have never had a patient die after such simple operation, and, so far as I know, no symptoms of intestinal obstruction or serious illness, referable to the intestines, has followed. These walled-off cases rarely have intestinal adhesions, unless the zeal of the operator, to get the appendix or to do more than is necessary in some other way, causes slight leakage. Perhaps, also, the incision may be too high, or too low, or too long, so that the abdomen proper may be tapped. Undoubtedly, in the early days of operating for this disorder, such mistakes were made, and the results were disastrous. I have noticed that many of the cases of interval operation have not had so satisfactory a recovery, and that a disability remained which did not follow operations for abscess cases. In talking with many physicians about their cases, where months or years have elapsed after an interval operation, this statement is often made.

In hearing intelligent laymen discuss the question, the usual statement is, that no man is the same after an operation. This is practically true of interval cases, but not of abscess cases. The former have intestinal adhesions, and, unless the operator directs his chief energies to their removal, the cutting off of the appendix may be of little service. The latter cases, as a rule, have insignificant intestinal adhesions, and

it matters little whether the appendix is found and removed or not, for it is effectually walled off from the abdominal cavity.

The interval operation for chronic appendicitis should, therefore, be most carefully done, not with a small incision, through which an appendix may be fished up and tied off, but with a large enough incision to allow a thorough examination of the intestines. The after-treatment seems also to be very important, if future trouble is to be avoided. In the fulminating type, when rupture has already occurred, and is not walled off, I have always dried and then drained with enough gauze to be sure that all points where pus was found should be touched by the drain or drains. The temptation to flush such cases seems to me dangerous, as to the immediate results, and increases the probability of extensive adhesions later.

In interval operations, where there is no pus a normal saline solution, in the cavity of the abdomen, is better than wiping. Sponging the intestines is always harmful. I very cautiously flush an abscess cavity, unless it is an old one, preferring to wipe, drain, and wait two weeks or more for a certain recovery, than to chance any injury to the protecting wall. After some other abdominal operations, especially abdominal hysterectomy, patients have been rolled from side to side, and the bowels have been kept moving for two or three days by most operators. This, undoubtedly, prevents, in a measure at least, adhesions. Where these are broken up, as in chronic appendicitis operations, this management, together with distension of the bowels, seems to me more important even than in hysterectomy.

---

## VESICO-VAGINAL FISTULÆ.\*

BY M. C. MCGANNON, M.D., NASHVILLE, TENN.,

Professor of Diseases of Women and Abdominal Surgery in the University of Nashville.

Ever since man was born of woman openings between the bladder and vagina have resulted as one of the untoward results of childbirth.

The earlier writings upon medicine, it is true, do not abound with descriptions of this loathsome disease, but those of the century past are rich with pen-pictures of vesico-vaginal fistulæ, and the heroic and glorious efforts of surgeons toward its cure; efforts that are justly called heroic and glorious, because they required the patience and perseverance and courage of heroism to have been crowned with the brilliant results which were theirs.

Up to the early part of the past century, I am not aware of any cures being recorded from operations done for vesico-vaginal fistulæ, and even the few cases that were successfully treated before the middle of this century failed to leave any lasting impression upon the medical world. So much is this true, that it may be safely said that up to 1850 the condition was thought by the profession to be incurable.

Dr. Marion Sims, in "The Story of My Life," speaking of his first investigations, in 1845, for the treatment of this disease, used the following language, in referring to a case of vesico-vaginal fistula that had been brought to him: "I have consulted all the authorities I can find; a fistula in the bladder—whether big or little—is absolutely incurable." This very case, to which Dr. Sims referred in the above quotation, was the one on which he did the first operation in that series of surgical experiments which resulted in a priceless boon to the world.

Since, through them and their publication by Dr. Sims, the medical profession had it thrust upon them that vesico-vaginal fistulæ was not an incurable disease. From that time until the present the principles of the operation have become gradually better understood, and improvements in the technique of the operation itself have been, and are constantly being, made, but perfection has not yet been reached.

The essentials for success in the repair of fistulæ between the blad-

---

\* Read at the meeting of the Southern Surgical and Gynæcological Association at Atlanta, Ga., 1900.



der and the vagina are, a knowledge of the anatomy of the parts, proper denudation and adjustment of the surfaces to be united, and, above all, absence of tension or dragging along the line of sutures.

The failures experienced and recorded by the early operators for this affection were due to one or more of the causes I have just mentioned. The anterior vaginal wall and the wall of the bladder, where they lie in apposition, were not sufficiently recognized as individual structures, that might be separated with advantage in the closure of large openings.

Tension of the parts, producing dragging upon the sutures, was early seen to be a cause for failure of union, and attempts were made to overcome this by lateral incisions in the vaginal wall. The part that sepsis played in preventing a cure, fortunately has been, for many years, recognized and obviated.

The walls of the vagina and bladder are distinct, and may be separated without danger or damage to either; the uterus is easily dissected, free from its connection with the bladder wall, and the vesico-uterine fold of peritonæum may be pushed up, and the peritonæal covering of the bladder itself separated from that viscus. The blood supply, coming as it does from the posterior division of the internal iliac, in those branches that penetrate the bladder wall in its front, middle, and upper parts, on either side, cannot be interfered with in isolating the bladder; hence, its nutrition is secure under every circumstance. A knowledge of these facts enables the surgeon, in every case, to separate the bladder from its connections sufficiently to close the opening, be it large or small.

In looking over the history of this operation, we find the names of the best gynæcic surgeons of this country, in connection with its evolution: Marion Sims, T. A. Emmet, Battey, Bozeman, Lee, Hunter, Mundé, Currier, H. H. Sims, Kelly, Marcey, and others; while foreign surgeons have been by no means behind those of America in lending their aid towards perfecting its technique.

Marion Sims pared the edges of the fistula, and secured union by bringing them together. Tension on the sutures caused failure in many of his cases.

T. A. Emmet, that deep-thinking leader of plastic surgeons, soon recognized the part that tension played in causing failures in this and other plastic operations about the vagina, and sought to overcome the difficulty by making lateral incisions, and sliding the vaginal tissues in such fashion that the edges of the fistula could be approximated without dragging upon the suture line.

Alexander Hugh Ferguson, of Chicago, in May, 1892, employed vaginal flaps to cover in the opening between the bladder and vagina, which, though ingenious, could hardly be considered as a distinct advantage.

In 1894, Mackenrodt, of Berlin, conceived a plan of operation, the principles of which are suitable to all of these fistulæ. He separated the bladder from the vagina, and sutured each independently. Since that time, Charles P. Noble, Howard A. Kelly, and Henry O. Marcey, have each applied this principle, in different ways, with marked success.

Until this common-sense procedure was devised, large fistulæ were deemed incurable. This is proved by the fact that that so good a surgeon as H. M. Sims, of New York, reported to the New York Obstetrical Society, in March, 1893, a case of incurable vesico-vaginal fistula. I quote from the *N. Y. Obst. Jour.* his words: "The anterior wall of the vagina and the base of the bladder are entirely destroyed, leaving no vaginal margin, either laterally or antero-posteriorly. The obliteration is as complete as though it were done with a punch; this permits the posterior walls of the bladder to avert themselves through the opening, where the base of the bladder formerly was, and there, in full view, are the two ureteral openings, welling up with urine every few seconds. An operation on such a case being out of the question, I could only send the poor girl back home."

A diagram of the condition accompanied the text; see *N. Y. Obst. Jour.*, Vol. III., page 415. The drawing showed that the urethra and the vaginal wall anterior to the junction of the urethra and bladder, were not injured, a state of things identical with a case I shall relate.

This paper was discussed by Dr. W. Gill Wylie, Dr. Edebohls, Dr. A. F. Currier, and Dr. Pryor, none of whom took issue with Dr. Sims, and, as these men were, and are, all surgeons of high rank, it is evident that in 1893 the profession deemed this class of cases incurable.

To-day, there is no excuse for these cases being uncured, or being only relieved by such mutilating operations as turning the uterus into the bladder, to close the opening or by closing the outlet of the vagina, and making an opening above the pubic bone, through which the urine may be poured, as water out of the spout of a tea-pot, by upending the body.

By separating the bladder from its surroundings, to the extent necessary, any fistula, be it large or small, may be closed. I have applied this principle in six cases during the last two years, with primary

union and complete closure of the fistula in every case. The technique in each was the same, and I shall briefly outline it in detailing one case, which, because of the extent of the injury, is worthy of being recorded.

The patient, a young woman, thirty-three years of age, was referred to me by a medical gentleman who lives in the State of Tennessee. She was a farmer's wife, in poor circumstances. She had always been able to do, not only her house-work, but also, at times, to help in the

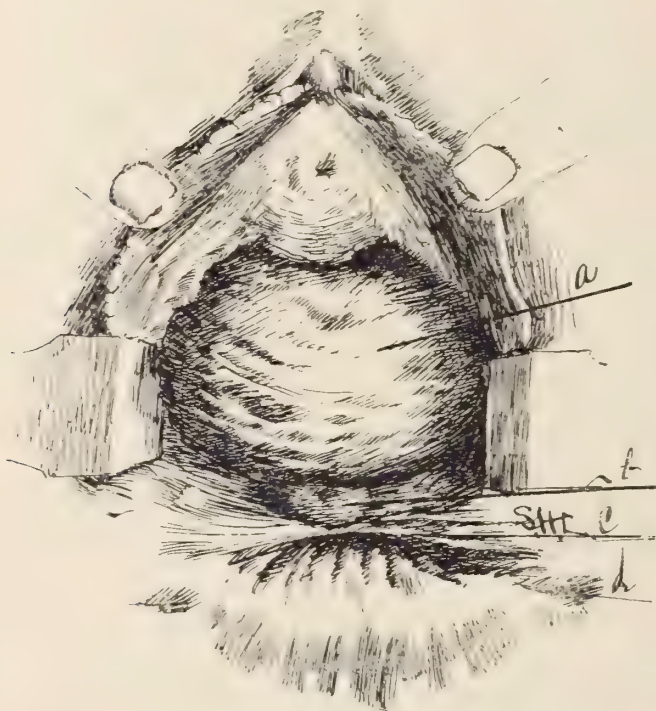


Fig. 1.—(a) Inside of bladder protruding through the fistula. (b) Cervix uteri. (c) Recto-vaginal septum. (d) Ends of sphincter ani.

fields. She was the mother of three living children. Three months before she came under my care, she had given birth to a monster, presenting anterior duplicity. After a labor of six hours, one head passed through the vulvar outlet, but for twelve hours more all efforts at delivery of the rest of the child were futile. After consultation, as the child was dead, it was determined to make a supreme effort at extraction, by pulling upon the presenting part. The result was the

delivery of a well-formed child, with two distinct, symmetrical separated heads, fused at the shoulders; there were two necks, and, between them, an elevation like the ending of a shoulder; the outer shoulders were natural, and, from the point of one to that of the other, across the back, measured nine inches. Immediately after delivery it was

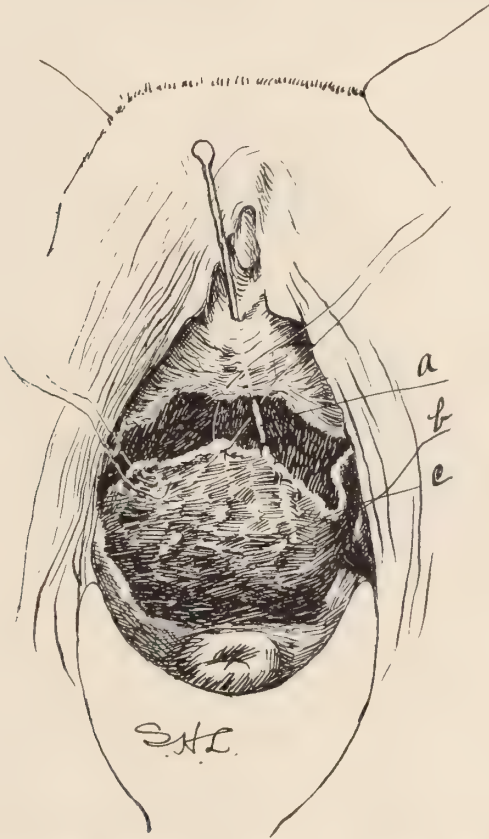


Fig. 2.—(a) Urethral catheter in ureter. (b) Fundus of bladder freed and brought forward. (c) Two sutures introduced and ready to tie.

observed that the recto-vaginal septum had been torn through; four days later there was no control over the escape of urine from the bladder.

Upon examination, I found the external parts much excoriated from constantly being bathed in urine; the vulvar orifice gaping, the recto-vaginal septum divided half-way to the cervico-vaginal junc-



tion, and the anterior vaginal wall and base of the bladder gone, from three-fourths of an inch behind the meatus urinarius to the cervix, the anterior lip of which was partly gone; from side to side the opening extending from one lateral vaginal wall to the other, as shown in Fig. No. 1.

On March 31, 1899, three months after the date of injury, under chloroform anæsthesia, I passed a ureteral catheter through the urethra

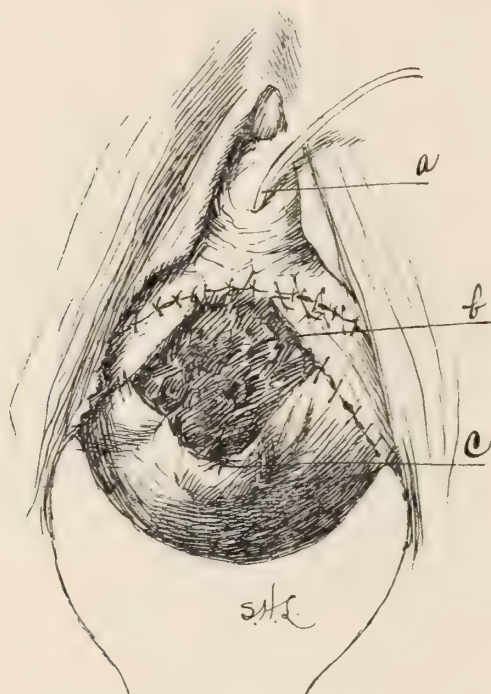


Fig. 3.—(a) Catheter passed into ureter. (b) Portion of bladder wall uncovered by vagina. (c) Cervix uteri.

and into the ureter, on the left side, as a guide, that I might avoid injuring that tube during the operation. I then dissected the bladder free from the uterus behind, and separated the peritonæum from a portion of its fundus, until I could bring the separated part forward to that portion of the bladder still remaining at its junction with the urethra. I then separated the bladder from its lateral connection for about an inch on either side, so that when the posterior part was brought forward and united with the anterior part, in a crescentic line,

there was no tension at any point. Fine catgut was used throughout to unite the bladder walls. (See Fig. 2.)

In introducing the sutures near the ureter, care was taken to roll its opening into the bladder, but, at the same time, not to cause any constriction of its caliber. The catheter, which was passed through the urethra and into the ureter, was left *in situ* for twenty-four hours, and then removed.

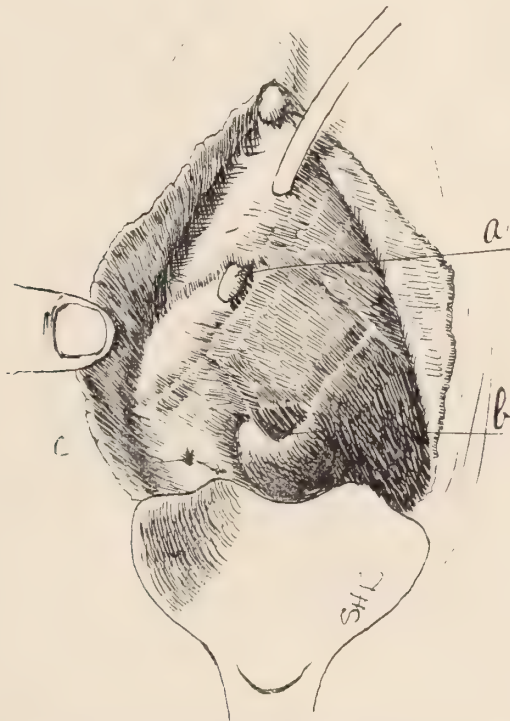


Fig. 4.—(a) Sound showing bladder opening for new piece of ureter. (b) Cervix uteri. (c) Opening of ureter in vaginal vault.

After closing the bladder, the widely separated edges of the anterior vaginal wall were brought together as near as possible, but a large space was left to close by cicatrization. (See Fig. 3.) Silk-worm gut was used for these sutures in the vaginal wall. At the end of a week the silk-worm gut sutures were removed, and the bladder was found to be closed.

An opening was now made in the line of closure, on the right side, near the lateral vaginal wall, from which I intended to later remove

a strip of mucous membrane, with which to lengthen the ureter on that side. The ureter, as I before stated, emptied high up in the vault of the vagina. (See Fig. 4.) Before making this extension to the ureter, I wished the cicatrix in the anterior vaginal wall to become firm.

Thirty days after the first operation the patient was again anæsthet-

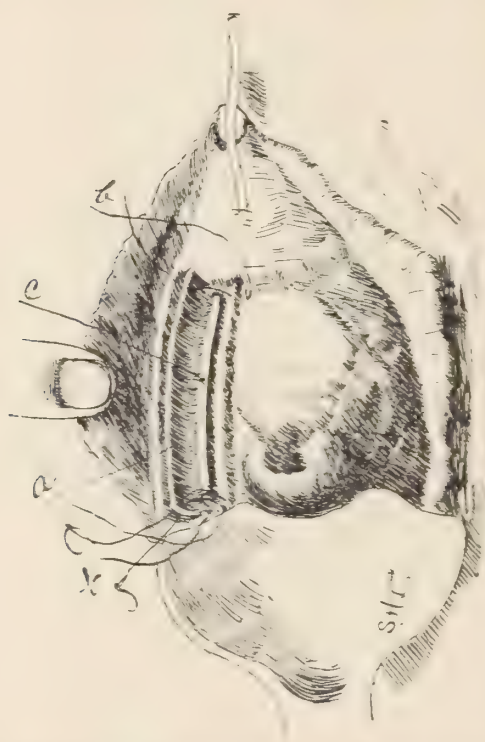


Fig. 5.—(a) Dissection and formation of flap for extension of ureter. (b.b.) Shows sutures introduced at either end of new ureter. (c) Catheter passed through the urethra along the channel and into the ureteral opening in the vaginal vault.

ized, and a strip of mucous membrane freed from the lateral vaginal wall, beginning in front of the small opening left in the bladder, and continuing to a point behind, where the ureter opened in the vaginal vault. A denudation one-fourth inch wide was made on the anterior vaginal wall, around the opening into the bladder, and back to and around the opening of the ureter. This flap, raised from the lateral vaginal wall, was folded over and united with silk-worm gut sutures.

to the denudation just described on the anterior vaginal wall, forming a tube leading from the ureteral opening into the vaginal vault to the opening left in the bladder. (See Fig. 5.)

A ureteral catheter was passed through the urethra, along the new channel, and into the ureter. This was allowed to remain forty-eight hours and removed.

Union took place at once. The sutures were removed at the end of six days.

The urine flowed along the new channel into the bladder, without leakage, from the time of the operation, and now more than a year has elapsed, and the urine still continues to flow through this artificial ureter without trouble.

It only remained to repair the rectal wall, anal opening, and pelvic floor, which was done shortly afterwards, and the patient went home cured. This woman has since remained as well as she ever was in her life.

In each of the other five cases to which I have alluded, the bladder was separated from the vagina and closed with fine catgut, care being taken to secure, without tension, perfect approximation of the edges of the opening in this viscus. As far as possible, the vaginal walls were brought together.

I desire to emphasize the fact that success in this operation depends largely upon absence of tension at the suture line, and careful approximation of the bladder wall. The vaginal wall may be disregarded.

Vesico-vaginal fistula of large size, such as the case herein described, cannot be closed by the operation described and practised by Dr. Sims, unless the operator possesses the skill and patience shown by Dr. T. A. Emmet. His success, however, in closing these large openings, was only obtained after repeated operation upon the same case.

Up to 1894, when Mackenrodt brought forth the principal of separating the vaginal wall from that of the bladder, such a closure could not have been made by one operation; it was practically impossible. Now, however, by utilizing this method of separating the bladder from its connections, any of these openings may be closed at one sitting.

---



## URETERO-VESICAL IMPLANTATION—THREE CASES.

By J. F. BALDWIN, A.M., M.D., COLUMBUS, OHIO.

Surgeon to Grant Hospital; Fellow of the American Association of Obstetricians and Gynæcologists, etc., etc.

In the AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL for November, 1900, J. Wesley Bovée, M.D., publishes an article on injuries to the bladder and ureters, in connection with vaginal and abdominal hysterectomies. The statistics which he gives, as showing the frequency with which these injuries occur, are somewhat startling. Thus Jacobs, 400 vaginal hysterectomies, 4 fistulæ; Kaltenback, 195 vaginal hysterectomies, 15 fistulæ; Chalmoroff, 34 vaginal hysterectomies, 2 fistulæ; Schramm, 31 vaginal hysterectomies, 3 fistulæ; Segond, 266 hysterectomies, 6 fistulæ; Landau, 109 hysterectomies, 1 fistula; Spencer Wells (in 1881) collected 94 published abdominal hysterectomies, with one ureter divided in every six cases, and both ureters in twenty other cases; Byron Robinson is quoted as saying that in every 100 hysterectomies, abdominal or vaginal, one or both ureters are tied or cut across in at least three cases.

Having had, in my own practice, 319 hysterectomies, abdominal and vaginal, in which the ureter has been injured once by accident and twice purposely, it may be well to put the three cases on record, together with the technique employed to correct the evil. The first case has already been reported in the *Philadelphia Medical Journal*, of November 26, 1898.

*Case I.*—Mrs. S. B., New Lexington, O. Age sixty-two; had a solid tumor, filling the pelvic cavity and extending up nearly to the umbilicus. This mass was quite tender. Had been growing rapidly during the last two months, with steady failure of the health of the patient, who had lost at least thirty pounds in weight. The rapid growth of the tumor and steady emaciation, in the absence of hæmorrhage, were very suggestive of malignancy. On opening the abdomen, the tumor was found to be a fibroid, but evidently with malignant disease involving the right side and including a portion of the ureter. The uterus was removed by cutting down on the left side, across, and then up on the right side, so as to secure better enucleation. In spite of this, it was necessary to cut out, with the growth, about  $1\frac{1}{2}$  inches of the ureter. The excision was noted at the time, and as soon as

hæmorrhage could be controlled steps were taken to connect the divided ends of the canal. So much tissue had been removed, however, that this was impossible. A forceps was, therefore, introduced into the bladder through the urethra, and a point on the bladder wall selected which could be most easily approximated to the proximal end of the ureter. This point was opened, the forceps pushed through, the end of the ureter caught and withdrawn into the bladder, the opening in which was then carefully united to the ureter with fine catgut. This being done, the tension was found too great to render the implantation safe. The bladder wall, therefore, close to the point of implantation, was attached to the stump of the broad ligament. This relieved the tension entirely and at the same time served as protection to the ureter. A self-retaining catheter was then inserted, and, lest there should be some leaking, an opening made in Douglas' *cul-de-sac*, and a light gauze drain passed down from the point of implantation. This drain was allowed to remain about a week, but there was at no time any evidence of leaking. Recovery was prompt and uneventful, and the patient, when last heard from, only a few months ago, was in perfect health. The operation was made August 25, 1898.

*Case II.*—Mrs. S., Mansfield, O. Age 46; operated July 25, 1900. Had had a history of uterine disease for about three years, but with especially marked symptoms for one year past. Examination showed cancer of the cervix, extending into the vaginal walls and involving at least the lower portion of the uterine body. The mass, however, was movable, and the case seemed operable, but with a scanty margin. Advised examination under an anæsthetic with hysterectomy, by the combined method, if the case proved suitable. On operating, the cervix was first separated widely into the vaginal vault, so as to get beyond infected tissue. The abdomen was then opened, when a cancerous projection was found on the left side surrounding the ureter. The removal, therefore, on this side was made to extend to the pelvic wall and to include  $1\frac{1}{2}$  inches of the ureter. The proximal end of the ureter was caught with a pair of forceps before severing, so as to expedite the later steps of the operation. As soon as hæmorrhage had been controlled by ligatures, the ureter was implanted in the bladder by the same technique as that employed in Case I., nitrate of silver catgut being used to secure the implantation. The adjacent tissues were then carefully brought together around the ureter to relieve tension. The opening in the vaginal vault was used for drainage, the adjacent peritoneum and sigmoid flexure being brought together so as to close the pelvic floor. Recovery was prompt and without any leaking of

urine. Eight months later the patient was examined and found in good condition, but with evidence of recurrence of the cancer.

*Case III.*—Mrs. A., age 47, Sept. 24, 1900. Patient was very fleshy. Had one child, twenty-one years ago. No miscarriages. Presented a typical cancer of the cervix, with a history running back for about six months. The uterus was as movable as would be expected in so fleshy a patient, and no especial difficulties were anticipated in its removal. After separation of the vagina, however, and pulling down of the uterus, it was found that the cancerous mass had so extended into the left broad ligament as to interfere very materially with the rest of the operation. The entire mass was removed, however, a number of clamps being required to control hæmorrhage on the left side. These clamps were removed in forty-eight hours. There was no evidence of any injury to the ureter at the time of the operation or subsequently, until some two days after the removal of the clamps, when leakage of urine was discovered through the vagina. It seemed evident that the clamps, while not directly grasping the ureter, had hugged it so closely as to interfere with its nutrition, and produce a slough. Recovery from the operation was entirely smooth, except for the fistula. Subsequently examinations were made with a view to a vaginal operation to close this fistula, but, owing to the small size of the vagina, the large amount of adipose, and the character of the tissue, nothing could be done. The question then arose as to the advisability of opening the abdomen for the purpose of making an implantation. Bovee, in the article already alluded to, advises against this operation, until the lapse of nine to twelve months after the operation with no evidence of return of the cancer. In this case, however, the disease was so extensive that the probability of a return seemed very great. The question, therefore, was, whether it would be advisable to subject the patient to the risk of a section for the purpose of relieving her of the annoyance of the fistula. After careful consideration, it was decided best to make the section. This operation was accordingly made, Dec. 8, 1900. The abdominal incision had to be made of unusual length, owing to the great deposit of adipose, and the amount of fat was a serious interference throughout the entire operation. The ureter, however, was found with very little difficulty, separated from its adhesions at the point of injury, and implanted into the bladder by the method used in the previous cases. The ureter was attached to the side of the pelvis with catgut throughout its exposed length. The vagina was then opened and a wisp of gauze introduced for drainage. The abdomen was closed in the usual way. Convalescence was entirely uninter-

rupted, and at no time was there any evidence of leakage at the point of implantation.

The method of implantation adopted in these cases seems to be the simplest and most natural. It is, of course, not available in cases in which the injury to the ureter is too far removed from the bladder, but by artificial dislocation of the bladder the range of attachment can be increased so as to take in all or nearly all cases in which this injury occurs during hysterectomy. It is certainly a much simpler procedure than uretero-ureteral anastomosis. Under ordinary circumstances the time consumed would certainly not exceed five minutes, while a surgeon, who was present at my second operation, stated that only a few weeks before he had seen a prominent New York surgeon work two hours and a quarter making a ureteral anastomosis, at the end of which time the patient was in such condition that the visitor did not feel justified in making subsequent inquiry as to the result.

The use of the catgut prevents any possibility of a long-continued sinus from an infected ligature. Drainage is easily secured, and is, I think, important, considering the serious results of a possible leak. While the direct implantation does not give the oblique entrance of the ureter into the bladder, such as Nature furnishes, this can hardly be considered as making any difference in the ultimate results, unless it may be in the easier infection of the kidney, in case of a later cystitis.

As to the propriety of making an implantation in cancer cases, that, I think, should be left to the judgment of the surgeon and wishes of his patient, in each particular case. If life will likely be prolonged for a year or more after the hysterectomy, I think most patients would be willing to run the risk of an implantation rather than have life rendered miserable by a constant dribbling of urine. In many cases, however, it might be wiser to resort to the use of some form of urinal, and wait, as Dr. Bovée has suggested.

125 South Grant avenue.

---



## THE STREPTOCOCCUS IN GYNÆCOLOGY.\*

BY GUY L. HUNNER, M.D., BALTIMORE, MD.,  
Resident Gynæcologist to the Johns Hopkins Hospital.

I can scarcely hope to present new ideas to this assembly of workers in the field of obstetrics and gynæcology. But if, in the citation of a few cases that have come under my observation, I should succeed in emphasizing one or two practical points in the diagnosis and treatment of this important group of cases, I shall feel that my visit with you has been mutually helpful; for I am certain, in the discussion that is to follow, to gain new ideas and a stimulus for better work.

My thanks are due my colleague, Dr. G. Brown Miller, for allowing me to use some of these cases, for he is soon to report them in an excellent article on the same subject. In the *American Journal of Obstetrics*, Vol. 39, he reported seven cases of streptococcus infection, and his coming paper will contain a report of four others. The eight cases I speak of to-night include these four, which I was privileged to work up from the bacteriologic side, and four cases I have seen in the past two months.

You are all familiar with the two well-recognized clinical forms of streptococcic infection—the general, or systemic, or acute puerperal septicæmia, in which, in the course of one to three days after labor or abortion, we find the patient in a state of great prostration, with anxious, at times rather excited, facial expression; rapid pulse, variable in quality; high temperature; sleeplessness; intense thirst; dry skin, and coated tongue. Too often our efforts to save these patients are fruitless, and in the course of one or two weeks they die. In the second form we find certain local signs and symptoms, and greater or less general or systemic reaction. It is of this latter form that I wish to speak to-night, and I think the briefest and most forcible way for me to emphasize a few general principles, in their diagnosis and treatment, will be to cite case after case, and develop the subject as we proceed.

The first case was a young unmarried woman of twenty-two years, admitted Dec. 28, 1900, who, eight days before, had introduced a bougie to bring about an abortion of a two-months' foetus. Twenty-four hours after the bougie was introduced she passed some blood and a grayish-looking mass, which she considered a foetus. She was up and about for

\* Read before the Philadelphia Obstetrical Society, March 7, 1901.

a week, with no pain, and no discharge from the uterus. On the day before admission she began to have chills and fever, and on the day of admission, a burning sensation began in the pelvis and lower abdomen, accompanied by nausea and vomiting, and chilly sensations, and at the time of admission, 4 o'clock in the afternoon, she was seen in a shaking chill. She was seen soon after getting to bed, and her temperature registered 102° F.; her pulse, 108. She complained of being cold, appeared cyanosed, and had a troubled, anxious expression. Her pulse was small, bounding, easily compressed; her tongue pale, clean, and moist. She lay with thighs flexed, saying that this position eased her pain. She complained of constant burning in the pelvic region, but had none in the upper abdomen. On quiet breathing the abdominal movements were natural, but, on deep inspiration, the lower abdomen seemed fixed, and the patient complained of pain in this region. Deep pressure was well borne above the transumbilical line, but pressure below this line, in any part of the abdomen, caused pain and elicited muscle resistance. Movable dulness was made out on the left side, but was considered due to bowel contents. During examination of the abdomen two attacks of spasmodic pain occurred, each lasting about a minute, the patient describing them as burning and pressing in the lower abdomen, and shooting pains in the lumbar regions.

Pelvis examination per rectum revealed a large, soft, and very sensitive uterus, with no lateral masses.

The leucocytes at 5 P. M. were 15,500, the temperature at 6 P. M. was 103.6° F. Soon after examination the patient passed several large blood clots, after which her spasmodic pains ceased. In the fluid blood, which flowed for some time after the clots were passed, microscopic examination revealed a great many cocci in chains, and a few bacilli. There was no odor from this discharge. The patient's temperature reached normal six hours after admission, and did not again rise.

I cite this case as one that is usually dealt with by the obstetrician rather than the gynecologist. It belongs to that class forming the majority of puerperal infections, called by Matthews Duncan *sapramia*. The toxemia in these cases was formerly supposed to be due to the presence and action in the uterus of the saphrophytes, and various putrefactive organisms of which we know but little. But later workers have shown that the ordinary pyogenic organisms are quite as frequently the infecting agents.

The question of treatment in such cases is still one of much discussion. We called the surgeons in consultation over this particular

case, and, influenced, I suppose, by their valuable experience in appendix cases, they were in favor of immediate exploration of the abdomen. Knowing how often these puerperal cases recover, and having the patient where we could watch her closely for signs of general peritonitis, we decided to follow the expectant plan. Had she not spontaneously ejected the clots from her uterus, we would undoubtedly have had to curette within the first twenty-four hours. This we would have done gently, using care not to scratch up the deeper walls of protective cells usually thrown up in these cases, and then we would have douched with sterile water. As it was, we simply used hot fomentations until the pain ceased, and at the end of a week of normal temperature we curetted the retained secundines.

Case II. does not correspond to the type most frequently seen in streptococcus infections, but it demonstrates the form of treatment I wish to emphasize, when one is compelled to enter the abdominal cavity and do hysterectomy, in streptococcus cases.

The patient was one with pus tubes, as well as localized pelvic abscesses. As you know, pus tubes are not a characteristic of streptococcus infections. The patient, a married woman, aged forty-one years, mother of eight children, had given birth to a child twelve days before admission. Her labor was normal, the physician arriving in time to deliver the placenta. The patient was a midwife, and said the physician used no cleanly precautions before attending her. She did not know whether he put his hand in the vagina. The day following she had a severe chill, her temperature arose to  $105^{\circ}$ , and abdominal pain with tenderness and swelling began. The abdominal symptoms were relieved by cathartics and hot fomentations. She had a second severe chill, and has had chilly feelings every day. Her temperature has not been below  $100^{\circ}$  at any time.

The patient came to the hospital because of this fever, general weakness, and more particularly because of great difficulty in voiding urine.

On examination she did not appear very ill—she was anæmic, her tongue was red and coated, her temperature registered  $98.6^{\circ}$ , and pulse, 84. The abdomen was full, rounded, and soft—a mass was felt reaching into hypogastric region from below. The outlet showed rectocele and cystocele, the bladder apparently being full and everting the anterior vaginal wall. The fundus was represented by a large, rounded, irregular, doughy mass, lying slightly to the right of the median line, and reaching two-thirds of the distance between the symphysis and umbilicus. There was very little abdominal tenderness. There was a small area of special tenderness at the junction of the uterus and left

broad ligament, but no pelvic masses could be felt. A diagnosis was made of subinvolution, possibly retained secundines. The patient was ordered rest in bed, hot douches, bowels well regulated with salts, and careful note of vaginal discharge.

She had to be catheterized a few times the first two days, but this trouble cleared up, and she improved steadily until the fifth day. On this day she had her first elevation of temperature, registering 99.8°. The temperature became higher each day, until it reached 102°, on the seventh day. On the eighth day she complained of severe pain in the left inguinal region, and an enlarged gland was noted. On the tenth day a boggy, oblong swelling was noticed along the site of the round ligament, as it emerged from the external ring. On the thirteenth day she complained of severe pain over the entire lower left quadrant of the abdomen. On bimanual vaginal examination, a soft, boggy, and very tender mass was discovered to the left of the uterus, in the broad ligament. From the seventh to the eighteenth day her temperature reached 102° to 103° each day, her pulse varied from 100 to 120, and the patient was gradually losing ground. After much persuasion, she consented to an operation.

On opening the abdomen the peritonæum was found much thickened and congested, the omentum was adherent to the bladder and plastered over the sigmoid, and this, in turn, was densely adherent to the left tube and ovary. The sigmoid was freed with much care and difficulty, pus escaping from the end of the left tube as the sigmoid was detached. Dry gauze was packed over the tube, and the bowels were carefully packed away from the pelvis. A hysterio-salpingo-oöphorectomy was begun by first tying off the right ovarian and round ligament vessels, and then freeing the right pus tube and adherent ovary. The bladder was then dissected across, and tying of the left side begun. This was complicated by the presence of great œdema of the tissues and three isolated abscesses, one located far out on the side in the infundibulo-pelvic ligament, another about the round ligament as it left the cavity, and a third beside the uterus, in the base of the broad ligament. Artery forceps were plunged into each of these abscesses, which were about 3 c.m. in diameter, and the contents taken up with dry gauze. The infundibulo-pelvic abscess contained a thick caseous pus, while the others held a white pus of creamy consistency. After tying the uterine vessels and amputating at the cervix, the posterior lip of the cervix was split and the incision carried down into the posterior vaginal wall. Through this incision two large iodoform gauze drains were carried, and these laid loosely to fill the entire true pelvis. Two large iodoform



gauze drains were then loosely placed in the false pelvis, in such manner as to keep the intestines entirely away from the site of the abscesses, and these drains were carried out of the lower end of the abdominal incision, its upper two-thirds being closed with through-and-through silk-worm gut sutures, after carefully laying the omentum between the gauze and intestines.

The patient was of low vitality before the operation, and she showed severe collapse for two or three hours following the operation, but strychnia and hot stimulating enemata assisted in her rally, and she had a good convalescence, except for a pleurisy with slight effusion, which, however, cleared up before her dismissal. I saw her two weeks ago and she is in excellent health. *Streptococcus* was found on cover-slips and grown.

We all recognize to-day that by far the most frequent puerperal infection is that of the streptococcus, and that the route of extension in puerperal infections is generally through the uterine walls, particularly at the site of the detached placenta. Consequently, we most often find in these cases an infection of the tissues about the uterus, and to this infection we give the term parametritis. Naturally the infection may extend in any direction, and we recognize parametritis, anterior, posterior, and lateralis.

Generally these invasions of the connective tissue are limited to the lymphatics of the pelvis, but they may travel anteriorly, forming abscesses as high as the umbilicus; posteriorly, as high as the posterior mediastinal space; laterally, we frequently find abscesses in the false pelvis, on the venter of the ilium.

My third case I shall class as one of parametritis anterior, although it is decidedly atypical. The patient, aged thirty-three years, entered the hospital about two months ago, complaining of weakness and tenderness in the lower abdomen. Eight weeks before admission she had a miscarriage of a five-months' foetus. She bled profusely for two days, when her physician removed the afterbirth from the uterus by inserting the hand. The next day she was taken with chills and fever, headache, nausea, and general malaise. She was in bed four weeks, and for the past four weeks has been up and about the house, but noticed, a day or two after getting up, that she had great tenderness and some swelling over the symphysis pubes.

On admission she was anæmic, her hæmaglobin being 55 per cent. Her temperature ranged between 101° and 102.4°, and the leucocytes were 11,000. The hypogastric region was considerably distended by a boggy fluctuating mass. The pelvis organs were normal, the uterus

being pushed downward and forward by the mass in the anterior abdominal wall. A desire to urinate was caused by bimanual compression of the uterus below, and the mass above. Dr. Kelly operated, simply making a free incision through the œdematous fat and anterior fascia, and evacuating 300 or 400 c.c. of milky white pus from an abscess cavity formed over the recti muscles. Streptococci were demonstrated on cover slips and in culture.

The other five cases are more characteristic of parametritic infections, with which the gynecologist has to deal. I will first speak of two fatal cases, from which we had impressed upon us certain points in their diagnosis and treatment.

Case IV. entered the hospital in June, 1899, complaining of abdominal pain and a mass in the lower left abdomen. She had given birth to five children, and dates her present illness from the birth of her last child, twelve weeks before admission. She was in bed eight weeks after her confinement, with nausea, and pain and burning in the left side. She noticed a tumor mass in the left side soon after labor. She had no chill, and thinks there was no fever. On admission her temperature was 99.4°, and her pulse, 100; her color was good, and general condition good. The abdominal walls were flaccid. In the lower left quadrant was a mass extending from Poupart's ligament to the transumbilical line above and to the rectus muscle medianwards. This mass was of "bony hardness" along its pelvis portion and softer towards its upper border, where peristalsis and intestinal tympany were observed. Vaginal examination revealed a normal feeling uterus and right lateral organs. The mass on the left was independent of the uterus and rigidly bound to the pelvic floor. Various diagnoses were made by different members of the staff. On opening the abdomen the uterus and right lateral structures were found normal. The proximal end of the left tube seemed normal, but its distal end was lost in a mass made up of tube, ovary, broad ligament, intestines, and thickened peritoneal wall. On attempting to free the very adherent intestines, a small amount of pus escaped from the region of the ovary, and this showed cocci in chains. Dr. Stokes was operating, and after a futile attempt to free the intestines he decided to abandon the operation and leave free drainage through an incision posterior to the cervix and through the abdominal incision.

The pulse continued rapid after the operation, and on the fourth day the gradually increasing temperature reached 103°. There was extreme thirst, vomiting, and restlessness; the leucocytes were 28,000. She died on the fourth day, and, while no autopsy was permitted, we

felt sure that her death was due to streptococcus peritonitis, as this organism had been grown from the pus obtained at operation.

Case V. was one upon which Dr. Kelly performed a left salpingo-oöphorectomy, the patient dying seven days later, of a general purulent peritonitis. The case is particularly interesting, because she gave a definite history of her present illness dating from her last puerperium, two years previously.

At the operation a dense walled ovarian abscess was removed, no particular precautions being observed against infection of the general cavity. On the day after operation we were surprised to find a pure culture of streptococcus on our media. We should not have been surprised, had we considered the patient's history, and the character of the abscess wall, which was indurated and cut almost like cartilage.

The last three cases I will report were operated upon with these two disasters in mind. The diagnosis was made, in each case, of probable streptococcus infection, simply on the history and on the palpation, and the operations were done with due precautions.

Case VI. came to Dr. Kelly about the first of this year, with the following history: Thirteen months previously she had given birth to a child, and apparently had a normal puerperium, getting up on the tenth day. One month after labor she was taken suddenly ill with severe pain in the left side, and chills and fever. For three months she was in bed, with irregular fever, the temperature at times reaching 103°, night-sweats, nausea, and vomiting, local abdominal tenderness, and backache. For the past six months she had been about the house, exertion, however, increasing her pain. There had been more or less pain on micturition and defecation. This history made us suspect puerperal infection, and the pelvic examination strengthened our surmise as to its nature. The fundus was pushed slightly to the right by a hard, rounded mass, apparently occupying the broad ligament space and being fixed on the pelvic floor.

Dr. Kelly enucleated a tubo-ovarian mass, as in Case V., but in this instance the abdominal cavity was first well walled off, and on rupture of the mass care was used that no pus became distributed. The right tube and ovary were released from adhesions, and an adherent vermiform appendix removed. An incision was made posterior to the cervix, and a large iodoform gauze drain pushed through this and loosely laid over the raw area on the left, and behind the released right adnexia.

The patient's convalescence was uninterrupted, her highest tem-

perature,  $100.5^{\circ}$ , being reached on the fourth day. Streptococcus was grown from the pus.

Case VII. was that of a young woman who entered the hospital last June, complaining of pain in the lower abdomen, fever, and a bloody discharge. Three weeks previously she had brought on the abortion of a five-months' foetus by the introduction of a bougie. On the third day following the miscarriage she had chills and fever. Wishing to conceal her condition, she got up on the fifth day, and had been running a sewing machine until three days before admission, when she was again compelled to go to bed because of pain in the left pelvis and down the thigh. On admission, her temperature was normal and her general condition good. In the lower left quadrant of the abdomen a fist-sized mass was felt, and on vaginal examination this seemed to be far out in the broad ligament, and was rounded, immovable, and very dense feeling. With this history and examination and our experience with Case IV., Dr. Cullen decided to reach the mass with an extraperitonæal incision. Accordingly the Bardenheuer extraperitonæal inguinal incision was adopted. On reaching the venter of the ilium an abscess was found and evacuated of about two ounces of brownish pus. The walls of this abscess were thick and indurated. In breaking up this mass, Dr. Cullen thought his finger went through the peritonæum into the abdominal cavity. He, therefore, changed his rubber gloves and made a median exploratory incision. The uterus and lateral organs were found normal and no puncture hole was found. This median incision was closed and the inguinal incision freely drained with iodoform gauze. The patient made an uninterrupted recovery. Cover slips and cultures showed pure streptococcus infection.

My last case entered the hospital on January 1st, this year, and, like Case VII., is of particular interest, because of the extraperitonæal treatment. She began having labor pains and hæmorrhage five weeks previously, and, being seven and one-half months pregnant, she called a midwife. This individual packed the vagina and put the patient to bed. After three days, there being no more pain or hæmorrhage, the pack was removed. Pains soon began, and after twenty-four hours a living foetus was expelled. For the succeeding twenty hours the patient had severe after-pains and free bleeding. The midwife then introduced her hand and removed the retained placenta. About five days later fever began, and continued during the four weeks of her illness. She had been in bed with fever, pain in the right lower abdomen, severe dyspnœa, great general weakness. On admission, the patient was in a very prostrate condition. She was anæmic, drowsy, had no



anxious expression, subsultus about mouth muscles, foul breath, thickly-coated tongue; pulse, 130, small, soft, easily compressed; temperature,  $103.2^{\circ}$ ; leucocytes, 14,400. On examination there was no evidence of general peritonitis. She resisted palpation in the right lower quadrant. On bimanual examination a mass was felt filling the right anterior pelvis. This was intimately associated with the uterus, and lay anterior and to the right, bulging the right vaginal wall. The mass was of about the density of a normal uterus. Posterior to the cervix could be felt some induration.

An attempt was made to reach the mass by cutting through the vaginal vault, posterior to the cervix, and then working to the right with the finger, but the mass proved too dense. We then thought of puncture through the most bulging portion of the right vaginal wall, but on introducing a sound into the bladder and estimating the position of the ureteral orifice, it was decided that the ureter and uterine vessels might be endangered. Inserting a gauze posterior to the cervix, I abandoned the vaginal route, and made the right inguinal incision. By cutting parallel to Poupart's ligament, and about four centimeters above it, I made an incision about six centimeters long. The superficial epigastric vessels were seen at the lower end of the incision, and a large branch of the deep circumflex iliac at the upper end, but no vessel was clamped or tied in reaching the peritonæum. The peritonæum was pushed forward off the mass, and then, with blunt hæmostatic forceps, the mass was punctured. At first no pus was obtained, but by plunging the forceps in various directions and gently spreading the blades, several abscess pockets were evacuated. The pus smelled as though infected by the colon bacillus, and many bacilli and cocci were seen on the cover slip, but no growth was obtained on agar plates. In spite of this negative result, as regards the streptococcus, I feel warranted, from the history of the case, and from the cellutic character of the mass with its pockets of pus, in reporting this case among the others, all of which showed streptococcus in pure culture, except Case I. On the third day after operation, the temperature, which had fallen markedly, again rose to  $103^{\circ}$ , and the patient had a chill. I withdrew the gauze from behind the cervix, and, with an index finger in the retrocervical wound, I plunged an artery forceps through from the inguinal wound, and thus established a tract entirely through the cellutic mass. The patient made a slow but very good recovery, going home after six weeks, with some induration still palpable behind the cervix and on the right side.

Allow me, after this rambling report of cases, to recapitulate in a few words:

First, the gynæcologist should make a probable diagnosis of streptococcus infection from the history alone.

Second, the characteristic post-puerperal streptococcus lesion is the dense cellulitic mass usually situated in the subperitonæal tissues, and localized on one side or in one region. Palpation, as an aid in diagnosis, is second in importance only to the history.

Case II. demonstrates that there are exceptions to this rule.

Third, having made a diagnosis of probable streptococcus infection, consider well the method of operating. As you have seen from this brief series, many cases can be reached without entering the peritonæal cavity. Where it is absolutely necessary to do cœliotomy, use great care in guarding the general cavity, and if contamination of the pelvis occurs, leave a free supply of gauze, not so much for drainage as for the purpose of keeping the intestines away from the infected area, until there is formation of protective granulations.

---

## SPINAL ANÆSTHESIA IN CASES STRONGLY CONTRA-INDICATING GENERAL ANÆSTHESIA—A REPORT OF FIVE CASES.\*

BY ANDREW J. DOWNES, A.M., M.D., PHILADELPHIA, PA.,  
Gynæcologist to St. Mary's Hospital.

In the robust, healthy individual not too far advanced in years, owing to the complete abolition of all the senses, general anæsthesia properly administered leaves little to be desired. But patients with organic heart disease, with bad kidneys, with pulmonary complaints, in the debilitated and in the aged or in whom a combination of some of these conditions exist, every surgeon has desired a less dangerous and certain method of anæsthesia. Local anæsthesia after the method of Schleich partly solved the difficulty. The more recent procedure, the so-called spinal anæsthesia for operations below the diaphragm, is a further step, and almost a final one, in the solution of this surgical problem. I have refrained from using this method in the first class of patients. In the class of cases contraindicating general anæsthesia I have used the Corning-Bier method five times. I report these cases not

---

\*Read before the Philadelphia Obstetrical Society, March 7, 1901.

alone on account of the anæsthetic given, but also because of the surgical features involved in them. They were all under my care in St. Mary's Hospital.

*Case I.*—Mrs. S., aged 37 years, admitted November 7, 1900, to hospital, and soon transferred to my wards. She had been well until eighteen months ago, when she had an acute abdominal painful condition, diagnosed at the time as appendicitis. She had recently been in the medical ward of a large hospital.

*Present History.*—For the last five weeks she has complained of pain in the right iliac and pelvic regions. During the last two weeks her feet and legs, more especially the right one, are swollen. She is short of breath, has an irritable stomach and vomits nearly daily. The abdomen is enlarged, and contains a quantity of free fluid. A vaginal examination reveals a tender right ovarian region, with fixation of ovary and uterus. Note of November 14th shows severe abdominal pain, constant vomiting, a rapidly increasing abdomen and extreme dyspnoea. The case was diagnosed as tubercular peritonitis. The distension and tension of the abdomen prevented palpation of any contained organ, except as cited above per vaginam.

First operation November 27, 1900. Ether anæsthesia. Long incision in the semilunar line, seven quarts of ascitic fluid evacuated, and the following conditions noted: Cæcum congested and sparsely spotted with miliary tubercles, the appendix hard, white, adherent and tubercular. The right ovary and tube tubercular and fixed with the uterus in a layer of organized exudate, a plane of which seemed to divide the pelvis from the general abdominal cavity. A large tubercular mass in the omentum between the stomach and colon could be brought into view. By lifting the abdominal incision and looking within, a large, glistening peritonæal covered mass resembling in appearance a fibroid was seen continuous with and to the right of the stomach. Most of the bowel surface was studded with small gray tubercles. The abdomen was irrigated, emptied dry and closed without drainage. Owing to the low condition of the patient during the anæsthesia both breasts were filled with salt solution, oxygen and strychnia administered and every precaution taken; yet in spite of a brief operation, the shock was profound and the rally slow. In course of a week some improvement was apparent, the abdomen was flat and flaccid and its contents easily palpated. The large tubercular lump in the omentum near the stomach was now perceptible and easily felt by the patient, to her great disappointment. She informed me that it was the same as two months ago, before her abdomen was swollen. Vomiting had not improved by the

operation. She retained the food she had taken for about twenty-four hours, then she had a very large vomit, sometimes containing partly digested blood. There was not much pain in the stomach itself. She had moderate-sized fæcal movements. She continued to emaciate, yet her pulse, respiration and temperature became lower than since her admittance to the hospital. The abdomen remained flat, but began to have free fluid. The right leg to above the knee remained swollen. The temperature did not rise to above 99. Her vomiting was persistent as described above. She constantly begged me to operate, remove the lump and relieve if possible her vomiting. With the condition within her abdomen so thoroughly known there was little to be expected from surgery. Yet even if the chances of prolonged life are wanting it is hard to see one constantly vomiting. The patient desired to take the risks, so I finally yielded to her frequent frequests to make some effort. The experience of the former operation contraindicated general anæsthesia and the subarachnoid method was decided on.

Second operation, January 4, 1901. Twenty minims of a 2 per cent. solution of cocaine were injected through the fourth lumbar interspace. The needle at first impinged on the laminæ, but finally was made to enter the interspace and fluid ran freely from the needle, but it was blood-tinged. However, it came so freely that I thought some small vessel was bleeding within the medulary canal and tinged the spinal fluid. Anæsthesia came on slowly. After waiting ten minutes the abdomen was prepared and after the lapse of fifteen minutes since the injection, the incision was started. She felt pain, so I infiltrated with a very small amount of Schleich's fluid, which I had ready for this emergency, and made a three-inch incision upward from the umbilicus. The incision was too short, so I continued it with the scissors above the infiltrated area with no complaint from the patient, proving that finally anæsthesia had extended to the ensiform twenty (five) minutes after the spinal injection. There was some intra-abdominal improvement. There seemed less tubercular studding of the bowel. The mesenteric masses were smaller and there were only two quarts of ascitic fluid. No fresh adhesions could be found. The mass continuous with the stomach was found to be a tubercular condition of fully one-half of the stomach, the pylorus and some of the duodenum. There was evidence of an old healed large ulcer on the anterior wall of the stomach. The patient was very much distressed at hearing me say that I could remove nothing. This depression, with very severe vomiting once before the incision was made and again while handling the stomach, produced the appearance of great shock. She rallied, however, and I



decided to give her the small chance of a gastro-enterostomy. Posterior fixation was out of the question owing to the thickened condition of the mesocolon, so I brought the nearest coil of small bowel over the colon and the tubercular omentum to a healthy portion of the stomach on its anterior wall to the left of mid stomach and united the surfaces in a somewhat novel method. Any method except suture alone was not practical, because one could not sew from the under side with a medium between the approximated surfaces. I united by continuous suture the intestine and stomach for two inches side to side lower part of stomach surface to adjacent longitudinal surface of bowel. When the end was reached the suture was continued half an inch away and higher on the stomach wall parallel to the first row of stitches to meet a higher opposite level of intestine, and this second line of sutures carried back to opposite the original starting point. The suture was continued to the original starting point, so that, when tightened, this small unsutured part would be closed. It was left loose, the approximated surfaces of the stomach and intestine incised by small opposite incisions, scissors inserted and the mid line of the united surfaces cut through to nearly the length of the approximation. The end suture was pulled tight and tied and an extra stitch taken at each end. No soiling of the peritonæum occurred. The bowel before and beyond the anastomosis was attached by a few stitches to prevent angulation. The abdomen was closed and the patient placed in bed with very little depreciation from the operation. During the operation there was involuntary bowel evacuation. On leaving the table a blood-stained vomit occurred. There was a post-injection rise of temperature of only one degree. There was no delirium. The pulse and respiration increased in frequency and the heart grew weaker, and she died without any complaint and little or no pain twenty-four hours after the operation. She was perfectly conscious throughout and there was no evidence of impending death until five minutes before the end came, when her heart gave out. A post mortem made within half an hour revealed a perfectly clean abdomen and a nonleaking anastomosis. The preliminary deprivation of food, the lavage of the stomach before operation, in an already starved and emaciated patient, the realization that she had no chance, and the necessary drain on her limited vitality of so serious an operation hastened slightly the evidently impending end of her life. There was no evidence whatever that the anæsthetic was a factor.

The specimen which I exhibit is a tubercular stomach far advanced with pyloric obstruction.

*Case II.*—Mrs. C., aged 70 years. The uterus began to descend to

patient's knowledge over two years ago. Five months ago the cervix appeared at the vulva. Examination revealed complete prolapse of the anterior and posterior vaginal walls, with large, ulcerated discharging cervix extending two inches below the vulva. The cervix was much elongated, the fundus was behind the symphysis in the pelvis. The cervix, cystocele and rectocele were replacable, but remained so only in recumbent position. The patient was miserable, unable to stand on her feet long, could do no work, and the appearance of the excoriated, pus-covered and slightly bleeding cervix was suspicious. I advised removal of the uterus. The presence of mitral regurgitation and aortic stenosis, and her advanced age, contraindicated general anæsthesia. Operation January 11, 1901.

Vaginal hysterectomy, electro-thermic hæmostasis, no ligatures; anæsthesia—twenty minims of 2 per cent. solution of cocaine in sub-arachnoid space. Temperature normal at 11 A.M., before operation. Highest temperature  $103^{\circ}$  at 7 P.M. Delirious about four hours. No headache. Accelerated bounding pulse for over twelve hours. Next day perfectly conscious. Gauze packing removed on the third day hardly blood-stained. No tympany. Little abdominal pain. Rapid convalescence. Patient left hospital within four weeks. Vomited twice during operation and had involuntary evacuation of bowels and bladder. She left operating table in marvelously good condition, gave no evidence of shock or anxiety during operation, seemed to be quite pleased, and so expressed herself.

*Case III.*—Mrs. H., aged 40 years, admitted to St. Mary's Hospital 4 P.M., January 19, 1901. The next morning I obtained the following history: Two years ago she had an attack characterized by pain and swelling in the right lower quadrant of the abdomen. She was in bed three weeks, her attendants diagnosing her case as peritonitis. Present trouble began January 3, 1901, with sudden acute pain in the back and abdomen. Pain lasted two hours and disappeared, so that she could resume her work. She did not faint. January 6th, three days later, she had a similar attack, this time accompanied by vomiting but no loss of consciousness. She had a third attack the following Sunday (January 13th), which compelled her to go to bed, where she had since remained until moved to the hospital. The pain came on suddenly and caused faintness. During these attacks she bled freely, but gave no history of passing decidua. During the last week there had been constant but moderate bleeding.

Examination January 20th. Shows a fluctuating, very sensitive mass below and behind the cervix, which is pushed upward and backward

behind the symphysis. The uterus is fixed in and above the surrounding mass. I incised the tense bulging post-vaginal fornix after sterilizing the vagina and gave vent to over a pint of dark clotted blood, rendering the diagnosis of extra-uterine rupture certain. On admission January 19th at 4 P.M. the pulse was 80, respiration 20, and temperature  $100^{\circ}$ . January 20th at 8 A.M. the temperature was  $100^{\circ}$ . The incision was made at 2 P. M., before which she had had a mild chill. At 4 P. M. the temperature was  $102^{\circ}$ , and at 7 P. M.  $103^{\circ}$ . The following day the morning temperature was  $101^{\circ}$  and the pulse 80. I removed the small piece of gauze in the vaginal incision and about a half-pint of dark fluid blood escaped. I purposely refrained from opening the abdomen because no active hæmorrhage could now take place, rupture having occurred a week before. Second, because in spite of the fact that a mild degree of sepsis was present as evidenced by slight tympany and fever, I hoped my vaginal incision might render a section later safer. A third reason for delaying section and depending on vaginal incision was the pallid and low condition of the patient. I decided if the temperature did not abate to operate, if possible, per vaginam the following morning (22d), and decided to use spinal anæsthesia. The morning temperature of the 22d was  $101^{\circ}$ . I gave the patient 15 minims of a 2 per cent. cocaine solution. The vagina was cleansed and the uterus was found fixed with the cervix behind the symphysis. It was impossible to move it with a tenaculum and difficult to enter, and any vaginal operation was deemed inadvisable. The abdomen was now prepared and opened. The patient vomited three times and had two bowel movements. On opening the peritonæum the widely distended ruptured right tube was found filled with blood-clot and sac contents. The whole pelvis was filled with blood clots and old dark liquid blood. No fresh blood. The right tube was ligated, the ligatures of catgut tearing through the soft granular tissue. The left side was now examined and a large distended tube found which opened on manipulation, and was found filled with blood. At this stage the patient complained, was restless and the recti muscles became tense, so that ether was started. Up to this time there was not the slightest evidence of shock, the pulse being full and strong and as slow as in the beginning. Under ether the pulse became fast and weak and signs of shock appeared. The left tube was ligated at the cornua and part removed; the balance was found deep in the cul-de-sac, with a large parovarian cyst at the end. The left tube gave evidence of implantation, as if not over three weeks' growth. The case was probably a double extrauterine pregnancy. The patient rallied quickly from the shock, but her general

condition remained about the same as before the operation, temperature reaching  $101^{\circ}$  every afternoon. No faecal movements occurred, though gas passed quite freely until the fourth day. On the fourth day there was a sudden fall of temperature (three degrees), the abdomen distended, black vomit occurred, and in spite of all efforts she died on the fifth day. Post mortem showed bowel constricted at the sigmoid flexure of colon, and mild evidences of peritonitis, which was in existence, however, before operation and persisted in spite of it. As far as the anæsthetic was concerned no connection can be found. It was successful, except that its influence was not sufficiently prolonged or perhaps had I not under the anæsthetic prepared the vagina and abdomen sufficiently long anæsthesia would have been obtained to complete the operation.

*Case IV.*—Mrs. M., aged 36 years, admitted to hospital February 10, 1901. Temperature was  $104^{\circ}$ , severe headache and chills. There was severe pain in the right side of the abdomen and diarrhœa. Has been spitting blood, but says it is habitual. Some pain in the left side of the abdomen. Has had six miscarriages, the last in April, 1900, when she was very sick with severe abdominal pain and fever. She has had pneumonia and suffers from laryngitis and bronchitis. She has aortic and mitral heart murmurs and is exceedingly pale, with a blood count of 5,000 whites. The abdomen is very large, fat and tympanitic. An examination shows a badly torn cervix, a fixed uterus, a pronounced cystocele and rectocele and hæmorrhoids. No mass could be found in the abdomen. I determined to do all the plastic operations under spinal anæsthesia and ascertain and relieve if possible any abdominal lesion causing the elevated temperature.

Operation February 21, 1901. Fifteen minims of a 2 per cent. solution of cocaine were injected into the spinal canal. The needle was directed into the interspace and a few drops of blood-tinged fluid obtained when the needle was as deep as I had yet in any case inserted it. The patient was so stout as to make it difficult to feel the spines of the vertabræ. I cautiously advanced the needle to its shoulder and obtained the clear spinal fluid, which ran freely. Anæsthesia rapidly occurred with vomiting and faecal movements. I could find no gross condition of the adnexa or appendix and decided not to open the abdomen this time. A curettement trachelorrhaphy, and colporrhaphy, perineorrhaphy, and dilation of the sphincter and removal of the piles by electro-thermic pressure was done. The anæsthesia in this case was followed by severe delirium, fever and headache, lasting sixteen hours, longer than in any case. The anæsthesia was entirely satisfactory



throughout the operation and was accompanied by no depression or shock. The plastic operations were entirely successful. There is still considerable pain, although less within the abdomen, and spells of diarrhoea. I am inclined to think that the intra-abdominal trouble is a localized streptococcus lesion and will probably operate through her abdomen by the same anæsthetic, and would despair of doing anything to this woman under any other.

*Case V.*—Miss R., aged 49 years. Houseworker. Has mitral systolic murmur. Is short of breath. Has worked very hard and looks pale and weak. Complains of pain in right iliac and lower median region of abdomen and a severe pulling pain in lower part of the back. Admitted to the hospital February 22, 1901, on which day uterine bleeding occurred after an absence of three months. Examination revealed a complete prolapse of the anterior and posterior vaginal walls and an elongated cervix uteri. The entire vaginal mucous membrane was without the vulva. Within the abdomen and continuous up from the elongated cervix was a large mass, dull on percussion, yet only semi-solid. It extended in the middle line to the umbilicus, and was globular in shape, as wide as long. A partly cystic growth was diagnosed, and, owing to the patient's appearance, the presumption of malignancy was entertained. She had recently lost in weight and strength.

Operation February 25, 1901. Subarachnoid injection of 12 minims of a 2 per cent. solution of cocaine. Owing to a moderate scoliosis the needle impinged on the laminae. It was reinserted a fourth of an inch nearer the vertebral spine and was then easily made to enter the interspace. Panhysterectomy was then performed in the following manner: Closure of the cervical canal, from which blood was flowing. Circular incision around the cervix and dissection anterior and posterior without opening the peritonæum for two inches, controlling blood-vessels on each side with my electro-thermic angiotribe and cutting close to the uterus. A purse-string catgut suture was placed within the vaginal cuff, the cervix pushed above and the suture tied, thus cutting off the vagina. The abdomen was now prepared, opened and the large tumor, which proved to be the fundus uteri containing a large fibroid undergoing cystic degeneration, was punctured to lessen its size that it might be delivered through the abdominal incision. It was then removed by the electro-thermic angiotribe, applied as follows: First under the right ovary through the broad ligament to the uterus as low down as possible, cutting through, but within the uterine side of the hæmostased area. Second, the same on the opposite side. Third, along the right side of the uterus through the broad ligament to the

uterine artery or its branches. Fourth, same on the left side. Next section of vesicle reflection of peritonæum and the little cellular tissue remaining, and finally, incision through posterior reflection and the little remaining tissue, still retaining the uterus and delivery of the entire uterus. No ligature was used throughout. It was my intention in uniting the anterior and posterior reflections of peritonæum to include the vaginal fornix from the abdominal side and suspend all from the lower angle of the wound. In my hurry, for the patient was coming out of the effects of the anæsthetic, I failed to bring into the suture the vaginal cuff, as I discovered later. The anterior and posterior reflections of the peritonæum were united entirely by a running suture of catgut and attached to the abdominal peritonæum as the incision was being close. The pelvis and abdominal cavity were thus excluded from the vagina and the small space left above the vaginal purse-string suture.

The abdomen was united in layers. At the conclusion of the operation I found the lower portions of the vaginal walls had descended and that the fornix had not been suspended as was intended. Gauze was placed in the vagina and a T-bandage applied to hold it back. The patient was placed in bed in wonderfully good condition. She had only a mild headache, beginning fifteen minutes after the operation and lasting eight hours. There was very little post-anæsthetic rise of temperature, only  $101^{\circ}$ , reaching the highest five hours after operation. There was no delirium. Late Wednesday afternoon, fifty-six hours after operation, I found that the gauze had been expelled from the vagina, and that there was a very slight oozing through the purse-strung vaginal fornix. I flushed the vagina and inserted a small return flow uterine douche a half-inch through the purse-string closed fornix and irrigated under low pressure the space between the fornix and the united peritoneal reflections shutting off the abdominal cavity. Fresh gauze was inserted within the vagina. The patient continued in good condition with better pulse temperature and respiration than during the three days before operation. The abdomen was perfectly flat, there was no pain, the bowels were moving freely, so that Saturday morning (sixth day) she looked perfectly well. At noon on this day she gagged and vomited very severely, and strained exceedingly until she brought up a live eight inches long round worm. It was noticed that after this effort the gauze was expelled from the vagina, that a quantity of fluid, the first deeply blood-stained, escaped, that the vaginal walls descended to nearly their old habitual level, and that the closed fornix had opened and was visible.

The vagina was repacked and held back with bandage and gauze. The next day she was in excellent condition, although a slight offensive discharge was noticed coming from the gauze in the open fornix vaginae. Respiration 20, pulse ranging from 72 to 80, and a morning temperature below 99° was the record of the sixth day, before vomiting the round-worm. The next day a slight rise in temperature occurred. Monday morning she seemed in good condition after a comfortable night's sleep. At 8:30 A. M. she was seized with agonizing pain in the abdomen, she rapidly went into a deep shock, with a fall of three degrees in temperature, with a cold and clammy blue skin and a pulse rapidly becoming imperceptible. All usual efforts were made. I saw her a few minutes before death, at noon, four hours after the onset of acute symptoms. An immediate post mortem revealed the following: An aseptically healed abdominal incision. The peritonæum and omentum under it were healthy. The small bowel, which was first exposed under the omentum, was deeply congested, of an angry red color. I found one coil fixed at an angle to the underlying large bowel in the pelvis. When freed a layer of thick yellowish white organized lymph was found on the small bowel where the contact had occurred between the bowel surfaces. The large bowel which filled the pelvis was covered by a grayish-white membrane and the coils united lightly. Death was due to acute infectious peritonitis starting at the point of contact between the small bowel and the colon in the pelvis and extending rapidly to the whole small bowel. The reflections of peritonæum which had been used to close the pelvic floor and exclude the vagina were open. During the effort to dislodge the worm the strain had separated the layers, as evidenced by the escape of peritonæal fluid as described above. The infection had immediately affected the large bowel, as evidenced by the two days' growth of infectious lymph. At the same time a coil of small bowel not far from the jejunum had become fixed in the pelvis to a surface of large bowel not yet infected. On Monday morning there was rapid invasion of the uninfected peritonæum above the brim of the pelvis and acute angulation. The bowels moved freely before death during the acute attack following an enema; this and the absence of vomiting prove the angulation was high in the small bowel. The intensity of pain during the attack was similar to that produced by perforation of the intestine near the duodenum. It is possible that the heart condition had something to do with the aggravated shock and sudden demise of this patient. Had I seen her two hours earlier or had the resistance been greater, opening of the abdomen, freeing the angulation and irrigating might have helped her. During the post-mortem I

particularly noted that there was no evidence of ulcerating, necrosed or decomposing tissue at the sites of the hæmostased areas. The sides of the pelvis were perfectly smooth, nor was there any adhesion of bowel to the hæmostased areas.

The specimen from this case which I exhibit proves it to be a fibro-liomyoma, non-malignant.

I very much regret in the interests of spinal anæsthesia that the surgical results were not more successful. I feel certain, however, that it will be very hard to find any connection between these results and the anæsthetic. The unlooked-for ending of the last case is particularly unfortunate in that two novel methods were used, spinal anæsthesia and electro-thermic hæmostasis, neither of which contributed in the least as a causative agent.

The method of preparing cocaine solution in these five cases was that reported by Dr. W. S. Bainbridge in the *Medical Record* for December 15, 1900, which appealed to me as being quite as practical as any other of the numerous ways, since cocaine cannot be raised to the boiling point by any method and be effective. Certainly we do not depend on a temperature of 80° C. to sterilize any other article used in surgery with the exception of spinal injection fluid. The method of Dr. W. R. Stone, as reported in the February number of the *American Journal of Obstetrics*, is extremely simple, but Dr. Bainbridge's method is open to very little objection, and it seems to me even less than any of the others. In using this method I adopted the following procedures: A measuring-glass is taken, thoroughly cleansed and sterilized and allowed to dry. Cocaine in crystalline form, carefully handled, is placed in papers, two and a half grains in each. A paper containing this quantity is carefully opened and the contents dropped into the bottom of the measuring-glass and one dram of ether from the original bottle is dropped on the cocaine and the glass moved to mix them thoroughly. The ether rapidly evaporates, leaving the cocaine dry and practically sterile. A dram or less of sterile water (better if it is distilled water), freshly boiled and cooled, is now poured on the cocaine to dissolve it. To this is added sufficient water fresh from the vessel in which it is boiling to make two drams, which with two and a half grains gives approximately a 2 per cent. solution. I make a puncture at the point selected for the injection with the point of a sharp narrow knife, and in only one case (my first) used any anæsthetic to the skin. Nor is it necessary. In selecting the point with the field sterilized I place the index fingers of the right and left hands on the respective right and left iliac crests and bring the thumbs together on the mid line



of the back, where the spines of the vertebræ are or should be. The lower edge of the thumbs should rest on an imaginary line between the highest points of the iliac crests. The right hand is removed and the knife puncture is made half an inch to the right of and not quite the same distance below the lower edge of the left thumb, which is resting right up to the median vertebral spine line. The skin puncture is made with the patient in the erect sitting posture. The puncture is sterilized, the scorching position directed, the needle is inserted in the puncture and directed slightly upward, inward and forward until clear spinal fluid flows from it. Two of my cases were quite stout, rendering it impossible to accurately determine the spinous processes, yet in these I quickly by the above procedure obtained the clear spinal fluid.

In none of my cases was there any headache, delirium, or anæsthetic fever the day following operation. This I am inclined to think was due to the method of preparing the solution fresh for each operation as advocated in this paper. In all but the first case the spinal fluid ran clear when reached. There is some doubt whether or not all the twenty minims were delivered within the subarachnoid space in Case I. The complete absence of headache, delirium, and fever following the injection raises a doubt. There was nausea, vomiting and an involuntary fæcal movement. Anæsthesia was quite late and none too strong or prolonged. The patient seemed to be using her nerve and felt severely the handling of her stomach. The fluid coming from the needle flowed not quite as freely as I have since seen it flow in the other cases. It had, however, the consistence of spinal fluid and was only slightly blood-stained.

---

## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

---

## EDITORIAL.

### A RECORD IN ECLAMPSIA.

The report of fifty-eight cases of eclampsia without mortality, abstracted in our last issue from Stroganoff's article in obstetrics, is a record sufficiently startling to demand more than passing notice. For the details of his treatment and results we refer our readers either to the original articles or to our abstract. Briefly, the treatment consists in the judicious selection and combination of some of the older methods, together with the practical substitution of oxygen inhalation for chloroform. The idea is, that chloroform is almost always useless during the convulsion, as respiration is usually practically suspended, and only interferes with the entrance of the oxygen which the asphyxiated state demands. It would seem, however, that during the convulsions as little oxygen as chloroform would be inhaled and that the principal advantage would be the negative one of not using chloroform; doubtless, though it is not distinctly stated, the oxygen inhalations are practised during the intervals as well. The rest of the treatment seems to be along the lines of conservatism and good sense, the aim being to do only what is needful and to disturb the patient as little as pos-

sible therewith. The eliminative treatment is practically discarded as tending to do more harm by upsetting the patient than good by cleansing her system. There appears to be a distinct advantage in the combination of chloral and morphia over either drug alone and both are used freely though not excessively. The narcosis thus produced is to be discontinued after from twenty-four to forty-eight hours, as usually the disease appears to be self-limited within such a period. Operative interference the writer found very rarely necessary, as the convulsions ceased and the cases went on to a natural issue; if, however, the convulsions should not cease, after a reasonable time, the writer would consider immediate delivery indicated. A warm bath for cleansing purposes, a milk diet (by rectum, if the patient be unconscious), stimulation and salt solution if needed, careful avoidance of all external irritation, keeping the nose and mouth clean, relieving the thorax of all weight, good ventilation and a liberal supply of oxygen complete the treatment.

As results, the maternal mortality was *nil* from eclampsia, though one patient died of lobar pneumonia, while the foetal mortality was 13.4 per cent. in thirty-eight cases of eclampsia during pregnancy. One of the children was dead on admission and one had a large teratoma.

The writer has proceeded upon the theory that eclampsia is an acute infectious disease from which the patient will recover almost always in less than forty-eight hours if the convulsions can be controlled; to this end his efforts have been directed with the results noted. To ascribe such results, in a disease whose mortality is ordinarily so great, merely to good luck seems unreasonable and so long as our knowledge of the pathology of the disease are so unfortunately theoretical, any method of treatment devised upon any theory as a working basis which can show results as good as the above demands consideration and further trial.

A. D. C.

---

### FAIR PLAY FOR THE SCAPEGOAT.

Despite all that has been written upon the subject of sterility, it is not only the laity that ascribe responsibility to the woman in the case but generally also the average practitioner who, though he knows better appears to forget, in the presence of an actual case, that the husband may be at fault. Especially if he find some slight abnormality in the woman he at once assumes that as the cause without further investigation as to whether it be the really efficient one. In fact, we

sometimes wonder why it is the accepted course for the woman to go first to the doctor, when a couple find themselves childless, and what sort of a cataclysm could be fairly anticipated if the wife should refuse to go to the physician until her husband should first present her with a certificate of his own health. It is, perhaps, rather useless to arraign the laity in a medical journal, except in so far as it may give rise to some remote, secondary result through primary stimulation of medical men. When we consider that, prior to marriage, the number of men that have been the subject of venereal disease and its sequelæ is vastly greater than the number of women with physical abnormalities, developmental or acquired, it would be reasonable to give at least as much and as early consideration to the masculine member of the barren partnership.

Abram Brothers, in a recent issue of the *Post-Graduate*, gives some interesting figures regarding primary sterility—i.e., cases with no history of previous children or miscarriage. Of such he has records of two hundred and fifty. He has considered examinations of the husband superfluous when the wife presented lesions sufficient to account for the sterility. In seventy-two of these cases the woman was found perfectly healthy and in these instances the husbands were examined with the result that fifty were found incapable of reproduction. That is to say that, in this series, the responsibility rested upon the husband in one out of every five cases. In twenty-five there was a complete absence of spermatozoa and, in one, even of semen. If we add those cases in which, though the wife be barren, the husband is equally sterile and (admitting ultimate causes) those instances in which the wife's barrenness is the result of lesions chargeable to old or recent gonorrhœa in the husband, it will be seen that the honors come pretty close to being even.

A. D. C.

---

### "AMERICAN MEDICINE."

It is with pleasure that we commend this new journal, whose editorial management has been assumed by Dr. George M. Gould, of Philadelphia, the veteran medical journalist. His name as sponsor to any medical journal would in itself assure the profession of the hardest and conscientious work, of judicious editing and the general excellence of any publication. But the journal in question, *American Medicine*, has intrinsic claims to the support of physicians in that it



is the first medical journal to be incorporated as a company and its stock distributed among the medical profession.

This is a great stride, we believe, in the direction which we have for many years pointed out to our subscribers, namely, that of coöperation of the profession in things medical and the journal should succeed for this reason of its foundation alone; but it has besides many other claims to success. Its size, the excellence of the arrangement and quality of its contents make it the best and most notable weekly journal published in this country and last (but alas! not least from a business point of view) its advertising columns appear extensive enough to support the journal alone, if it had no other source of revenue.

We heartily recommend it to the attention of our subscribers and of all others who need a compendium of general medicine and wish it unqualified success on the lines which it has laid down for its existence and management.

---

#### REVIEW.

The Feeding of Infants. Home Guide for Modifying Milk. By JOSEPH E. WINTERS, M.D., Professor of Diseases of Children, Cornell University Medical College. E. P. Dutton & Co., New York.

This is a very brief presentation of the conditions that must be taken into consideration in the artificial feeding of children with cow's milk. The method of modification recommended is of the general type, which has always seemed to us the best for home use, *i.e.*, a mixture of top milk, milk sugar, water and lime water. Tables are given for combining these ingredients in suitable proportions for different ages, also percentage analyses of these combinations. Full but simple and concise directions for making these mixtures, a descriptions of the apparatus needed, rules for the care of such apparatus, of bottles, nipples, etc., directions for times and quantities of feedings, etc., complete the book. It is brief but clear and exceedingly to the point; is an excellent book to put in the hands of mothers and contains all that the average practitioner needs to know about infant feeding in ninety-nine out of every hundred cases. Too much cannot be said in favor of so simple and straightforward a presentation, even though it be elementary, of this subject.

Progressive Medicine, Vol. I., 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Thera-

peutics and *Materia Medica* in the Jefferson Medical College of Philadelphia. Lea Brothers & Co., Philadelphia and New York.

The first volume of "Progressive Medicine" for this year begins with "Surgery of the Head, Neck and Chest," written by J. Chalmers Da Costa. Some of the best chapters are upon goitre, plastic operations upon the nose and palate; bullet and other penetrating wounds of the chest; empyema; the treatment of phthisis by intrathoracic injections of nitrogen-gas; surgery of the heart and pericardium; fractures of the skull and brain surgery. Frederick A. Packard writes of the infectious diseases, including rheumatism, with an interesting chapter upon recent bacteriological studies of the latter. Marié reports success in treating pneumonia with yeast and Norton has found amelioration of symptoms in a considerable number of pertussis cases, treated with carbolic-acid gas by rectum. Other chapters are upon further communications by Class, concerning the micro-organisms of scarlatina, upon a long paper by Dukes, regarding what he calls the "fourth disease," under which term he classifies those anomalous rashes that resemble both rubella and scarlatina yet appear to be different from both. The chapters on malaria and typhoid are long and interesting. The division devoted to pædiatrics is written by Floyd M. Crandall and is made up of many short articles that cover the field extremely well. Very valuable is the chapter on pathology by Ludvig Hektoen. There are discussions of cytotoxins and anticytotoxins, the pathology of infections, agglutination, etc., and the latest investigation upon various micro-organisms, including ray fungi and pathogenic yeasts; regenerative and other cellular processes, reproduction of elastic elements, toxins, phagocytosis and proliferation, embolism of parenchymatous cells and the histology and ætiology of tumors are all treated of at length. A. Logan Turner writes of laryngology and rhinology, devoting the greater part of the space to tuberculosis, epistaxis, the accessory sinuses, malignant disease of the larynx, congenital laryngeal stridor and the laryngeal affections of typhoid fever. Robert L. Randolph writes of otology. Acute suppurative middle-ear disease and its mastoid complications naturally receive much space and many minor matters are noted in short paragraphs.

The Medical News Pocket Formulary, New (third). Edition. Containing 1,700 prescriptions, representing the latest and most approved methods of administering remedial agents. By E. QUIN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy and

*Materia Medica* in the Jefferson Medical College, Philadelphia. New (third) edition, carefully revised to date of issue. Lea Brothers & Co., Philadelphia and New York, 1901.

This volume is a convenient pocket formulary and, while such books have a rather limited field of usefulness or ought to have such, lest they tend to replace memory and intelligence, the best of us forget things at times or are glad of a suggestion of a suitable combination of drugs or of a palatable exhibition of the same. Properly used, the book will be found both a convenience and a real aid.

---

## CORRESPONDENCE.

CHICAGO, ILL., April 20, 1901.

*Editor of THE AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL:*

SIR:—I noticed in your JOURNAL for April, 1901, an abstract from a paper by Dr. Edward T. Dickerman, on the "Laryngologic Aspects of Pregnancy."

He mentions the fact that there is a nasal obstruction in the early stages of pregnancy, which usually disappears about the seventh month of pregnancy. That there is such an œdema of the nasal mucous membranes is true, but I have never found it to be in any way serious to the patient. It does give rise to some inconvenience, as does an œdematous condition of the nasal mucous membrane at any time. Further than this slight inconvenience, I have noticed no ill-effect on the patient's health.

But there is an œdema of the larynx, occurring in the latter part of pregnancy, that is serious to the patient's physical well-being. These cases are not frequently met with but every obstetrician of large experience has met with them. They are difficult to treat and the results of treatment are unsatisfactory. They disappear soon after confinement and are liable to recur with subsequent pregnancies. I have never seen one that required intubation or tracheotomy but I have seen them where the obstruction was so pronounced as to give rise to serious apprehension as to the recovery of the patient. In two cases I expected to be compelled to perform intubation but was happily disappointed.

Those cases I have seen commenced about the seventh month of

pregnancy, as a slight hoarseness, with slight œdema of the mucous membranes of the pharynx and larynx. This almost imperceptibly increased in amount until both were very well marked.

One of these patients, with a tubercular history, did not permanently improve after her confinement and died in a hospital some weeks after the birth of the child. As I was unable to follow the case, I do not know whether her death was directly due to the œdema of her larynx or to pulmonary tuberculosis.

After a considerable experience in the treatment of such cases, I have been unable to find any cure for them. In general, astringents applied locally give a temporary relief while other drugs were ineffectual. In one case, I used a solution of cocaine and chloral, in water, with marked temporary improvement. In this case I used an aqueous solution, containing 4 per cent of cocaine and 10 per cent. of chloral, which I applied with a throat brush directly to the laryngeal mucous membrane. This undoubtedly saved me from having to intubate my patient.

None of my patients have been hysterical but I should expect an hysterical patient, so afflicted, to be a very troublesome patient to handle. Of course, the patients so afflicted are very much alarmed and I have fallen into the habit of telling them that there is no danger and that it will disappear soon after the birth of their children.

On one or two of these patients I have found it necessary to use chloroform during the birth and to terminate the birth with forceps. Even in such cases I have not had cause for alarm as regards the patient's life.

In no case that I have seen has there been any tendency toward spontaneous recovery until after the birth. In some patients, I have seen an œdema of the larynx due to a cold. These cases run the same course as in patients not pregnant, with laryngeal œdema due to a cold.

To recapitulate: These cases are idiopathic cases of œdema of the larynx, usually beginning during the seventh month of pregnancy, progressive in character, not materially influenced by medication and terminating soon after the end of the pregnancy. The prognosis is good.

E. D. SMITH, PH.C., M.D.

306 Division street.

---



## TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Stated Meeting, March 7, 1901.

The *President*, JOHN C. DACOSTA, M.D., in the Chair.*The Streptococcus in Gynæcology.*BY GUY L. HUNTER, M.D., OF JOHNS HOPKINS HOSPITAL  
(BY INVITATION).

(See page 404.)

## DISCUSSION.

Dr. WILMER KRUSEN: I do not feel competent at all to discuss this paper, but I do feel like asking several questions, because of the rich experience Dr. Hunner has had along this line.

I would like to ask whether he has employed the antistreptococcic serum in those cases in which there was danger of fatal result. I believe there is a great deal in this, particularly in puerperal cases, where, after having emptied the uterine cavity, searched carefully the pelvis, and evacuated pus, one frequently can do something for the patient by the use of injections of antistreptococcic serum.

Secondly, I would ask whether the vaginal puncture is advisable. We have always been taught to avoid vaginal puncture, but to use a broad vaginal incision to secure free drainage. I think that, if we make a puncture through the anterior vaginal fornix, in an abscess cavity between the bladder and the anterior wall of the uterus, or evacuate a Douglass' *cul-de-sac* abscess, unless we make a free incision there is danger of reaccumulation of pus. I have used the posterior vaginal incision for the evacuation of abscesses in the tube, and once or twice for abscesses in Douglass' *cul-de-sac*. I always tell the patient of the possibility of a secondary operation.

It would seem to me a strong tendency toward conservative surgery, if we could treat these cases by vaginal section to evacuate the pus, thereby preserving to the woman, to a certain extent, her functions. There probably have been too many sacrificial operations.

The protection of the peritonæum, by packing with gauze, is a very important point.

Another question is, whether, in these cases, Dr. Hunner recommends ergot or not.

Another point is, just how is the difference told from clinical history, between infection due to the gonococcus and other forms of infection? How is this difference told, when no cultures have been made?

Personally, I would like to thank Dr. Hunner for bringing this subject before us. I feel that I have learned a great deal from his description of the cases.

Dr. GEORGE M. BOYD: I think we are indebted to Dr. Hunner for this demonstration of the streptococcus infection in these various phases. I see that, in spite of their good work and teaching of the Johns Hopkins Hospital, patients become infected in Baltimore.

I have felt for a long time that these cases of streptococcus infection, at least a certain proportion of them, have their original focus of infection in the upper vaginal vault, the peritonæum, or the cervix. I can recall the case of an Italian woman, brought to the Lying-in-Charity Hospital, whose condition was parallel to one the doctor described, in which the patient was seen three or four weeks after delivery. She was delivered by a midwife. The late Dr. Goodell and Dr. Hickman saw the case in consultation with me. Under ether anæsthesia it was found that the infection was extraperitonæal. That patient had a pelvic abscess. I made an incision parallel to Poupart's ligament, about incision which Dr. Hunner describes, opening up the abscess, which drained freely, and the fortunate recovery of the patient followed.

The paper is exceedingly interesting to me, because of the description of such a variety of forms of local infection.

Dr. HIRST: There is one point which the doctor has brought out that is new to me. He mentions a case infected during a period of two years. We know that the streptococcus infection is virulent and rapid in its effect. Here is a case which shows this infection at the time of operation, and the history of the case shows its duration for at least two years. In another case there was five months of continuous suffering. This may lead us to suspect streptococcic infection oftener than we would have thought, from our previous studies.

Dr. A. J. DOWNES: I operated Feb. 23, 1901, on a puerperal case, performing hysterectomy. The woman was confined six weeks ago. On the third day she had a chill. She was treated for typhoid fever

for four weeks. There was then a change of doctor and change of nurse. The uterus was irrigated for the next two weeks with creoline, and, in spite of this, there was a temperature of  $99^{\circ}$  in the mornings, and  $103^{\circ}$  in the afternoons. I was asked to see the case. The woman was in very bad condition. I ventured to give her chloroform for examination. Under about five drams, I made an examination and curettement, bringing out a very little old decidua. I found a large mass all through the pelvis. The uterus was soft and fixed, and I advised operation. The following day the woman was removed to a hospital. She seemed moribund. She was placed upon the operating table with a morning temperature of  $101^{\circ}$ , and a pulse of 130. She was in very deep shock during the operation. A point which the doctor brought out was illustrated here: upon opening the peritonæal cavity, I found the omentum matted and descended slightly behind the uterus, and walling off the general abdominal cavity and uninfected bowel surfaces. As soon as I touched the omentum, pus welled from both sides of the soft large uterus. The tubes were large, distended and filled with pus. Both ovaries contained pus. I carefully inserted my hand back of the uterus, and applied to it a volselum forceps, but the least traction tore through the uterus. I removed the uterus with my electro-thermic angiotribe and left the cervix and packed the pelvis with gauze. She went off the table with a pulse of 150. She was given hypodermoclysis, and finally rallied. I removed the gauze on the third day. At the end of a week her temperature suddenly rose to  $105^{\circ}$ . I had left a temporary drain through the small incision. On this seventh day I introduced uterine forceps through the vagina, and reached a drainage tube, which I had passed down from above, and so drained. Temperature dropped, and she recovered.

The pus was not examined at the time of operation, and so the streptococcus not found. Other organisms, including pneumococcus and pyogenes aureus, were found in the uterus a few hours after. In this case the result was due to the fact that fresh peritonæal surface was purposely not exposed. I have always been of the opinion that, if a drop of such pus reaches the uninfected portions of the peritonæal cavity, the case could not be saved.

Another post-puerperal case was that of a woman treated at home for malaria, for six weeks. She was brought to the hospital in an apparently dying condition. At first operation was deemed inadvisable, but after two days it was ventured. She was placed under ether. An abdominal incision was made and the omentum reached, when pus welled out. The woman was already in collapse. Ether was stopped.

a small gauze drain inserted, and the patient sent to her bed. No irrigation was performed. She got well after a terrible struggle. In this case, also, no uninfected peritonæal surface was seen.

One point against the advocated procedure of Dr. Hunner is, that one must be able to definitely know that there is only a localized lesion in one side to have an operation like that do good. If one is so expert, and the disease is only on one side, it is an extremely practical and very useful procedure.

Dr. EDWIN ROSENTHAL: I would like to call attention to the treatment by antistreptococcic serum. I am at present treating a woman infected eight months ago, who had all the symptoms of malaria, so-called, and five or six days ago I began treatment with this serum. On the first day I administered 20 cubic centimeters; on the second day, again 20. The temperature, which was always high, over a hundred, began to fall, and reached the normal line. In acute cases of streptococcic infection, I have used as high as 120 cubic centimeters in one case. These cases are results of infection given by the midwives. Three other cases, similarly infected, I treated with the serum, and all have recovered.

I believe, if this were used by surgeons, they could guard against pneumonia and certain diseases prone to follow operations.

Dr. W. REYNOLDS WILSON: One or two of Dr. Hunner's cases recall somewhat similar conditions which have come under my observation, and which have yielded to treatment without operation. These cases have been instances of extensive pelvic exudation, where, notwithstanding the fact of their origin in puerperal infection, the infiltration has disappeared completely. I can recall one such case, where the patient came into my hands some six weeks after delivery. The exudate, which had extended downward from the peri-uterine connective tissue, traversing the pelvic fascia and occupying the perivaginal space on the right side, occupied the lumen of the vagina almost completely. The swelling was dense and non-fluctuating. It disappeared suddenly in two weeks, after systematic douching.

I am led, therefore, to wonder in such cases, what relation the inflammatory process may bear to the general pelvic infiltration described by Dr. Hunner, and having as foci the honey-combed abscess cavities, due to the invasion of streptococci.

The term *sapraemia* seems to be obsolete, inasmuch as cases formerly coming under this head are undoubtedly instances of septic toxæmia, the infecting agent being in reality the streptococcus, as stated



by Dr. Hunner. It seems to me the use of such words only increases the nomenclature, at the expense of precision.

It is interesting to study the rôle of the lymphatic system in puerperal infection. A certain form of infection is transmitted largely by the blood current, resulting in the overwhelming and sudden transference of the infecting elements to the general organism. Another form is due to the absorption of the septic material by the lymphatic system: with this absorption the local reaction usually gives rise to the localized processes found in milder conditions of puerperal infection. A third form is that in which the conditions seem to be those of a toxæmia giving rise to mild systemic consequences. This last form is frequently confused with the supposed putrid infection described as sapræmia.

Dr. C. F. NASSAU: I think Dr. Hunner's paper is a very thorough one, and it shows that he knows the conditions he has to treat.

The use of antistreptococcic serum, while theoretically very good, is useless if you have not a streptococcic infection. I think the cases of this infection very hard to cure are those in which there are no localized abscesses. Four years ago I saw two cases in one doctor's practice, in West Philadelphia. In two weeks, both of them died, without having any localized abscesses. The cases with the localized abscesses are the ones that get well, and get well sometimes by spontaneous rupture. I have used the streptococcic serum in two cases; one was an abortion. The woman had a very high temperature. There was a retained afterbirth, and she did not improve after careful cleaning out of the retained material. I gave her one dose of the serum, and she had an intensely violent reaction; a temperature of  $104.5^{\circ}$ , in about four hours after injection. The next morning her temperature fell to normal, and varied only slightly afterward. One cannot say whether the thing would have happened in any event. I saw a case at Sea Isle City, last May. I removed a placenta which had been in sixteen hours. The patient had lost so much blood that it was necessary to give her a large hypodermoclysis before making any attempt to examine her, as she fainted upon lifting her head. She recovered from that part of her illness, and when I went down, two weeks later, I found her almost dead from sepsis, and discovered that she had been douched with the fluid extract of ergot, instead of creoline. She had a very intense phlebitis, the left leg being much swollen. There was distinct thrombosis of the femoral vein. On bimanual examination, the uterus was slightly fixed, and the left broad ligament thickened, without, however, any suspicion of abscess. I put a dilator into the uterus,

opened the cervix, and pus escaped. I simply drained the uterus by packing in gauze, and gave her at once a dose of antistreptococcic serum. The discharge contained long chains of streptococci. Another dose was given her the next day, and, after a somewhat tedious convalescence, she recovered. A careful examination six months later showed no damage to her pelvic organs.

Dr. PARKE: I would like to ask if this infection ever occurs without demonstrable mass?

Dr. J. M. FISHER: I am sure we all feel indebted to Dr. Hunner for his invaluable presentation of so important a subject. In the discussion Dr. Wilson struck the key-note in the differential diagnosis between the various forms of infection: 1st, Cases in which the process is confined to the uterine cavity, resulting in a simple absorption, toxæmia; 2d, Cases in which the infection travels along the lymphatics, resulting, usually, in the formation of masses at the sides of the uterus that undergo resolution subsequently or break down in abscess. 3d, Those in which the germ infection takes place through the circulatory apparatus, thus giving rise to a general blood infection; and, 4th, Direct infection of the peritonæum through the uterine walls. It is of first importance to bear these various points in mind in the study of every case. Whenever the finger can be placed upon a mass at the side of the uterus, or where there is fixation of the organ as a result of the infecting process, the prognosis as to life is generally favorable—it is evidence that the disease has become localized and that by the use of hot douches, salines, and supporting measures suppuration, even, may be prevented in a large proportion of cases. This can't be too strongly emphasized. These cases may terminate in abscess and the patients become chronic invalids to be taken off by some intercurrent disease subsequently that frequently bears no relation whatever to the pelvic trouble. They demand surgical interference, to be sure, but not so much to save life as to conserve organs and restore the patient to a condition of comparative comfort and good health. Suppurative processes confined to the pelvis rarely kill. In this connection I recall a recent case of infection with masses on both sides of the uterus. The family physician urged immediate operation as a necessary procedure to save life, but the patient refused to have anything done, and in consequence of his persistency in the matter he was discharged. A few weeks later he was again engaged to attend the patient with myself in consultation. An examination revealed a softened mass that was evidently the seat of a large abscess. Operation was still objected to, so I told the physician that, under the circumstances, he might as well continue in

charge of the case, and wait for a spontaneous rupture of same into the vagina or rectum. This took place within about ten days, and the patient recovered. A vaginal incision would have saved the patient much unnecessary suffering, but her refusal to submit to the procedure did not end seriously.

Dr. Hunner (closing the discussion): In answer to Dr. Krusen's question regarding the antistreptococcic serum, I would state that we have used it in a few cases, but our experience has not been satisfactory. I am sorry that I cannot share Dr. Rosenthal's positive views, and I think we should be extremely careful in drawing conclusions. For instance, consider my Case I. I saw the patient early in the evening, with a severe, shaking chill, and a temperature of  $103.6^{\circ}$ . There were many chains of cocci in the blood from the uterus. Evidently this was a case of streptococcus infection. Six hours later her temperature became normal and remained so. Suppose we had used the serum when she was first seen. What a temptation it would have been to credit the serum with the favorable outcome! Knowing how much the serums vary in their potency, and how extremely protean is the streptococcus in its manifestations, and believing in individual susceptibility and immunity, we are not surprised that many cases treated with the serum recover; particularly as we know that so many recover without any treatment.

You ask, Dr. Krusen, how, from the history, we can determine whether the infection is of the gonococcus or the streptococcus. We cannot determine this point; but we can usually tell from the history whether the infection is puerperal in origin. We know that the streptococcus divides the honors with the gonococcus and other organisms as the cause of first puerperal fever; but when there is history of severe illness during the puerperium, followed by chronic invalidism, we know the streptococcus is responsible in a vast majority of instances; and, in operating, we should assume the graver condition and act accordingly.

As to differential diagnosis by palpation, we know that the gonococcus and tuberculous infections, occurring at any time, are usually bilateral, and manifest themselves as double pus tubes; while the streptococcus infection, occurring at the puerperium, and leaving a local manifestation, is usually of the parametrial connective tissues and unilateral, or localized in front or behind. Regarding the question of irrigation with salt solution: If we find pus in the peritonæal cavity which is localized we believed in dry technique, thus avoiding the danger of making a local process general.

As to our method of reaching inflammatory masses through the vagina—if they are between the bladder and uterus, or if for any reason puncture with the sharp scissors would be dangerous, we go in slowly with knife or blunt scissors and fingers; but in those processes situated back of the cervix, where rectal examination shows there is little danger from puncture, we use the sharp scissors, and after puncture, dilate the opening freely with the Goodell dilator or large French clamps.

Dr. Boyd asked whether the infection is not often from cervical or vaginal wounds. We believe so, most decidedly, but the results are the same, the lymphatics generally being the route of progression.

Dr. Downes spoke of operating upon a patient and getting a great deal of pus scattered in the cavity, the pneumococcus being found in this pus. We know that under certain conditions the peritonæum takes care of a large infection by virulent organisms, but this does not contraindicate every possible precaution against scattering pus, particularly if streptococci be suspected.

Dr. Hirst was surprised to hear that Case V. had probably carried living streptococci for two years. In Dr. Miller's report, before mentioned, he cites one case in which the history indicates the possible presence of the living streptococcus for twelve years.

Dr. Wilson believes that dense infiltrations may often be absorbed without operation, and those who have had much experience will agree with him. In those cases of thickening without actual abscess formation, the expectant plan of treatment is preferable; and, as Dr. Fisher says, there are very few of these puerperal infections upon whom we need to urge immediate operation. We generally place them in bed, on low diet, cathartics, and hot douches, and if there is abscess formation or other indication for immediate operation we do not wait. With case II., reported this evening, there was no positive evidence of infection when she was admitted, except her history. We placed her on the conservative line of treatment, thinking no operation would be necessary—or, at most, a curettage. But when, after five days, her temperature began to rise, her general condition failed, and we found evidence of abscess formation, we urged immediate operation. I agree that the term *supræmia* is bad, in the light of our present knowledge.

Dr. Parke asked if infection occurs without demonstrable mass. My first case was apparently one of the type often seen, where the infection is limited to the uterine cavity, or, if it travels through the walls, it is quickly subdued, and leaves no permanent trace. Dr. Nassau says truly



that these infections are not always localized. Too often the patient is found with an acute puerperal septicæmia. Or there is at first a local thrombosis in the veins, and infected particles, breaking off, are carried as emboli to various portions of the body, thus giving rise to the slower, but scarcely less fatal, condition known as pyæmia.

Again, the patients come in a moribund condition, with symptoms of general peritonitis. In operating upon cases of general peritonitis following abortion or labor we should first carefully give the friends or relatives a sufficiently grave prognosis.

Official Transactions.

FRANK W. TALLEY, *Secretary.*

---

## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*

[DR. T. W. CLEVELAND, DR. G. H. MALLET, DR. A. D. CHAFFEE.

## GYNÆCOLOGY.

## UNITED STATES.

*Dysmenorrhœa.*

GEORGE TUCKER HARRISON (*Jour. Amer. Med. As.*, February 9, 1901), after reviewing the nerve supply of the uterus takes up the various theories as to the causes of painful menstruation. He considers the extension of the term "dysmenorrhœa" so as to make it include all the painful symptoms evoked by inflammatory affections of the adnexa and their serous investments a serious and misleading blunder. For, while such inflammatory conditions seem sometimes increased during menstruation, such is not always the case, the menstrual flow occasionally affording relief. Notwithstanding Fritsch's objections to the mechanical theory of dysmenorrhœa, the writer believes that a majority of cases are due to narrowing of the cervical canal, by either arrest of development, flexion or tumors. Fritsch's theory is as follows: The mucous membrane swells considerably during menstruation, and the uterus becomes larger. The resistance of the uterus to this thickening of the mucous membrane and the dilation of the blood-vessels produces contraction and pain. A poorly developed or flexed uterus opposes greater difficulties to this normal distension.

A form of dysmenorrhœa of interest to the general practitioner is the pain accompanying menstruation in young girls soon after the first establishment of the function. This is due to the backward development of the uterus, especially to the small caliber of the blood-vessels. Tonics, exercise, laxatives, and the administration of a teaspoonful of the fluid extract of hydrastis, three times daily, during the intervals, will usually remedy the trouble in time. Phenalgin or antipyrin will usually relieve the pain at the period, but the latter is very depressing to the heart. Opium should never be used, except in extreme cases. Apiol given twice a day for some days previous to menstruation is of value. Where these methods prove useless, gradual dilatation with steel sounds or the use of electricity may be tried. In extreme and persistent cases gradual dilatation with sterilized laminaria tents gives better results than forcible dilatation at one sitting. A small tent,

properly bent and aseptic, is introduced, with the patient in Sims' position, and allowed to remain for twenty-four hours. Iodoform gauze is placed over the os uteri and the vagina packed. Larger tents are introduced at intervals of twenty-four hours, until the cavity will admit the finger; the uterine cavity is then tightly packed with iodoform gauze, and this is allowed to remain two days. If strict asepsis and antisepsis are observed, no infection need be feared. The first period following this treatment may be equally or more painful, owing to the irritation of the nerves, but subsequent periods are usually painless.

Where there is chronic endometritis or a myoma in the uterine wall the cervix may be dilated with Pryor's dilator, curetted with a sharp curette and packed with strips of iodoform gauze. The same treatment works well in the membranous form of dysmenorrhœa. Fritsch recommends the prolonged use of uterine irrigations of lysol, <sup>1</sup>/<sub>1000</sub>, after thorough dilatation.

Fliess, of Berlin, calls attention to what he terms nasal dysmenorrhœa. He finds that certain points, particularly the inferior turbinate bones, which undergo certain changes during menstruation, sometimes induce dysmenorrhœa as a reflex phenomenon. The application of cocaine to this part of the nasal mucous membrane alleviates the dysmenorrhœa, while cauterization will effect a permanent cure. The relation between the nose and the genital organs deserves further investigation.

Oophorectomy has been advocated in extreme cases, but it should never be performed for dysmenorrhœa alone. If the conditions of the adnexa demand the operation, the dysmenorrhœa may be relieved thereby, but the desired goal can be reached with less radical means by patience and discriminating treatment.

#### *Resection of the Pendulous, Fat Abdominal Wall in Cases of Extreme Obesity.*

LINDSAY PETERS (*Annals of Surgery*, March, 1901) thinks that in those cases where the accumulation of subcuticular fat in the abdomen gives rise to a protruding, pendulous mass, causing all the discomfort that a true lipoma in the same region would produce, operative procedure is justifiable; for aside from æsthetic considerations, the disturbance from the weight, the irritation of the skin, the undue fatigue from walking, and the possible interference with marital relations, render the patient's life miserable. The author reports, with Dr. Kelly's permission, a case on which the latter operated, where extreme obesity

was associated with temporary glycosuria. The patient was a Jewess, thirty-two years of age, who had had one child after a normal labor and puerperium. Her mother had diabetes mellitus. When twenty-three years old the patient's breasts suddenly became so large and pendulous that they were amputated five years later, their combined weight after removal being twenty-five pounds.

After this the abdomen accumulated fat and became extremely pendulous. About the time that her breasts began to increase in size intense thirst began, and continued. The urine was acid, normal in quantity, but contained sugar. The general health was good. The heart-beat was irregular, and there was a systolic murmur. The greatest circumference of the abdomen was 12 cm. above the umbilicus, where it measured 200 cm.

A transverse incision was made 13 cm. above the umbilicus, extending across the abdomen 85 cm. in length, and extending through a layer of fat 6 cm. thick to the muscular layer of the abdominal wall. Another transverse incision extended in a curve from the angles of the first incision downward and around and across the lower border of the pendulous mass. The fat was separated by cutting and blunt dissection with the fingers, and the enormous crescentic mass of skin and fat removed. Fifteen blood-vessels were ligated, and the wound closed with fifty-six sutures, two strips of iodoform gauze being placed in each end of the incision for drainage. A smooth abdomen was the result. Silver foil, sterile gauze and absorbent cotton, held in place by strips of adhesive plaster, were used for dressings, while over all was a tightly applied eight-tailed abdominal binder. The mass removed weighed 7.450 grammes.

Primary healing occurred along the line of sutures, but as the discharge from the right drain cavity became purulent on the seventeenth day, the patient's body was kept immersed in a tub of water for several days, until the cavity became filled with healthy granulations. A liquid diet was maintained for twelve days, and for three weeks longer only a light diet was allowed. The patient was allowed to sit up at the end of one month. Sugar was found only twice after the operation, and could then be traced to diet. At present writing the patient is well.

Dr. J. B. Bullitt, of Louisville, reports a similar procedure performed in the course of an operation for umbilical hernia, in which equally good results were obtained.

*The Surgical Diagnosis of Right-side Abdominal Diseases.*

A. L. BEAHAN (*Buffalo Med. Jour.*, March, 1901) says that in the



right abdominal region are included the right lobe of the liver, the gall-bladder, duodenum, pancreas, hepatic flexures of the colon, right kidney and suprarenal capsule, cæcum and ascending colon, appendix, right ureter, and coils of small intestine; while, posteriorly, it is bounded by the right psoas muscle. Acute inflammation of the gall-bladder begins with sudden pain in the right side, soon becoming general. Rapid, feeble pulse, quick thoracic breathing, fever, depression, tympanites, persistent vomiting, and tenderness at the junction of the outer one-third with the inner two-thirds of a line passing from the umbilicus to the ninth rib, at the notch found in the line of the costal margin.

In appendicitis in females, the spot of greatest tenderness is somewhat lower than the well-known "McBurney point." While the swollen appendix can usually be felt, it is sometimes impossible to palpate it until the bowels are freely purged, where the appendix is posterior to the cæcum. A hard right rectus means appendicitis; if it continues under the general relaxation of an anæsthetic, pus is present. Painful micturition means that the inflamed appendix lies pointing to the bladder, while a backward and upward pointing of the appendix causes backache. Increased pain at the menstrual period, accompanied by chilliness, and a slight rise of temperature, together with constipation, often indicates involvement of the appendix.

The right kidney usually projects one-half of its size below the costal border of the right lower rib. If enlarged by disease or a perinephritic abscess, it is pressed forward. When the latter condition exists the kidney is not movable, due to adhesions, while its smooth normal contour is preserved. The incision in these cases should be made posteriorly to avoid the needless sacrifice of the kidney. Pathologic conditions of the right ovary and tube can, as a rule, be recognized by careful bimanual examination. A floating kidney often simulates disease of the gall-bladder, but the latter is less freely moved. In one case, however, a gall-bladder filled with small calculi could be depressed below the umbilicus, and because the calculi were so small as to pass readily through the cystic and common ducts, no jaundice was present, and the diagnosis was difficult. Most groin abscesses are from the appendix. Many cases that were once considered psoas abscesses are now recognized as dependent upon appendicitis.

#### *Hernia of the Fallopian Tube without Hernia of the Ovary.*

PAUL F. MORF (*Annals of Surgery*, March, 1901) has collected twenty-three cases of undoubted hernia of the tube without hernia of

the ovary, and gives, in addition, the history of one case operated upon by himself. The study of these cases is of interest, from the point of view of diagnosis, for in not one of these cases was there a correct diagnosis made.

The rarity of the condition is due to several reasons: (1) The tube is placed so deeply in the pelvis that exceptional circumstances are necessary to force it into the hernial openings. Its relation to femoral and inguinal openings is such that increased intra-abdominal pressure would, in most cases, tend to force it more deeply into the pelvis, rather than towards these openings. (2) Hernia of either the tube or ovary naturally tends to draw the other organ along with it.

Of the cases reported, thirteen were inguinal; ten, crural; one, obturator. Of the first class, five occurred in infants, ranging in age (when the trouble was first discovered) from nineteen days to thirteen months. In the case reported by the writer, occurring in a woman of twenty-four, there was a history of hernia, dating from birth. It is not difficult to explain why the tube should enter the inguinal canal more readily during pre-natal, or the first few months of post-natal life. The canal of Nuck, which, in infants, projects as a tubular process into the inguinal canal, is still patent, while the tube still approximates its convoluted foetal arrangement and occupies a relatively high position, bringing it nearer the internal inguinal ring. Again, in pregnancy, the tubes are lifted above the pelvic brim, and we find two cases occurring in this condition. In another, the presence of a tumor may have changed the relative position of the organs, while in two cases, sudden, unusual movements were probably the cause.

Of the crural hernias, one appeared in the third decade, three in the fourth, and six in the fifth decade of life. In four cases, pregnancy was a complication; in two others the hernia appeared while doing heavy work or lifting, and in one case there was a large fibroid tumor.

In fourteen of the twenty-four cases strangulation occurred; six inguinal, seven femoral, and one obturator. This condition, even if unrelieved, is not as dangerous as strangulation of the intestine. In one case, treated expectantly, an abscess formed, opened spontaneously, the gangrenous tube was found in the dressings, and the patient eventually recovered. In other, cases acute or chronic inflammatory changes took place in the tube. In one case pregnancy occurred in the herniated tube, and operation showed the hernial sac filled with clots, and a foetus seven and one-half centimeters long. The case terminated fatally. In two other cases it was thought that ectopic pregnancy existed, but the evidence was insufficient.

While in the majority of cases the tube had undergone changes, in three cases, in infants, it was normal; if the condition in these three had continued until the attainment of active sexual life, pathologic changes would probably have followed.

In three cases there is only a post-mortem record, with no clinical history. In two infants there were such disturbances as might result from any hernia. In one case, irregular abdominal pain was the only symptom. Another had cramping pains, and increase in the size of the hernia, accompanying muscular effort. A third found the hernia painful only during the menstrual period. In three cases there were repeated attacks of strangulation, with intervals of comparative comfort. The symptoms due to complications were generally similar to those of ileus, or a localized peritonitis, while in inflammatory conditions of the tube the symptoms were those of salpingitis, etc., associated with the clinical signs of hernia.

A correct diagnosis of the condition might be made, if the possibility of its occurrence were borne in mind. Careful palpation of the hernial tumor, and the presence of a small cord-like body in the sac leading up to the hernial opening, might lead to a suspicion of the condition. The only rational treatment is a radical operation. Any attempt to reduce the tube by taxis, combined with manipulations through the vagina, would, in most cases, be unwise. When operation is undertaken, the tube should be reduced and allowed to remain intact, if healthy. If gangrene, suppuration, or other grave pathologic change has occurred, the tube should be removed. There is, of course, much less danger in the operation than when a strangulated loop of intestine is involved. Any one of the approved methods for the radical cure of hernia may be adopted.

*The Intravesical Evidences of Perivesical Inflammatory Processes in the Female.*

FREDERIC BIERHOFF (*Medical News*, March 9, 1901), in conjunction with his colleague, Dr. Knorr, of Berlin, examined 443 female patients, 214 of whom gave a history of either parametritis, perimetritis, or old malpositions of the uterus. In only 264 cases were there symptoms referable to the urinary organs, but a cystoscopic examination was made in each case. Where the pelvic inflammation was recent the exudate encroached more or less upon the bladder, impairing its distensibility to a corresponding degree, and causing the bladder wall to

bulge inward over the site of the exudate. Œdema bullosum was frequently an accompaniment of salpingitis and perisalpingitis.

Where the exudate has gone on to contraction and organization, the bladder is affected by the pulling of these strands upon parts of the wall, usually the lower lateral, upper posterior, and postero-lateral portions. The cystoscope shows, in these portions, sharp, scar-like formations, of a yellowish-white color, rising more or less above the surrounding wall, and tending to fimbriate at the ends. This condition must be differentiated from hypertrophy of the entire bladder wall, due to mechanical or spastic obstruction, and from contractions of the bladder muscle. In the case of hypertrophy the entire wall is crossed by a network of rounded projections, which seem to anastomose freely. The contractions of the bladder muscle cause muscle-bundles to appear over the whole field of vision, but, with the relaxation of the wall, they disappear. Where the perivesical inflammatory processes are recent the vesical changes usually disappear with the successful treatment of the pelvic conditions. Where inflammatory vesical changes exist they must be treated, and, even where these contracted strands have markedly diminished the bladder capacity much may be done to restore the bladder to its normal size, remove vesical irritability, and, in some instances, bring about a disappearance of the strands themselves. The treatment consists in gently injecting into the bladder as much boiled water as it will tolerate, letting it remain some minutes, and then allowing all but a small quantity to flow off. The process is repeated each day, very gradually increasing the amount of fluid injected, until the bladder tolerates the normal amount. The time required varies with the extent of the involvement, and the elasticity of the strands.

#### *Insanity in Women associated with Pelvic Diseases.*

W. O. HENRY (*Western Med. Review*, March 15, 1901) says that, in order to arrive at accurate conclusions on this subject, it is important that a large number of investigations be made by different observers, as such widely differing views are held, by both alienists and gynecologists, as to the advisability of operating for pelvic diseases on the mentally unbalanced.

In looking over the recent literature of the subject, one fact has been noted, that, while many were cured, many improved, in none were the mental troubles aggravated.

During the last six years the writer has operated, for pelvic dis-



case, upon sixteen women suffering from mental disorder. Melancholia was the prevailing type of insanity. In every case the condition of the pelvic organs was such as to justify operative procedures, entirely aside from the mental condition. In ten of the cases there was complete cure; gradual in three cases. The interval since operation has been from two to six years, with no return of mental disturbance. Three cases were improved, in two cases there was no change, and one patient did nicely for a week, then refused to eat, and finally died. It is quite probable that, had some of the cases been operated upon earlier, the statistics would have been better, but the results are sufficiently encouraging to recommend surgical intervention in all cases where it is needed in insane women. Of the sixteen operations, seven were double oöphorectomies, and nine were hysterectomies, with the complete removal of uterus and adnexa.

#### *Shock in Abdominal Operations.*

FENTON B. TURCK (*The Phila. Med. Jour.*, March 30, 1901) says that, in the absence of knowledge of the pathology of this complex symptom we recognize only the phenomena, the effect of certain changes that seem to occur through the medium of the nervous mechanism. By repeated observations and experiments the writer has become impressed with two factors that always are true of the condition. One is the decreased resistance against infection when shock is present, and the other is the fact that increased resistance to infection is to be obtained by the internal application of heat in the splanchnic area. It is well known that it is practically impossible to perfectly sterilize the skin of the abdomen, and, while most of the micro-organisms found are, in a measure, non-pathogenic, yet, with the vitality and the resistance to infection lowered by shock, these so-called non-pathogenic organisms may produce infection and death.

The writer, in the *N. Y. Medical Record* for Aug. 11, 1900, described a method of covering the abdomen with an artificial skin, by taking thin rubber dam sheets and cementing it to the abdomen. Various cements are suggested. Simple bisulphide of carbon will dissolve the rubber and cause it to adhere firmly to the skin. A cement made of sterilized rubber and balsam works well. This artificial skin is left firmly adherent, to be cut through by the surgeon at the time of operation. It forms a perfect protection against skin infection, and lessens any shock resulting from the evaporation of the wet skin. Another device, for preventing shock consists in introducing into the

patient's stomach a thin rubber bag, attached to the author's double-current stomach tube; one side of the double tube is then connected with an irrigator, and water, at a temperature of 122° F., is allowed to flow into the bag within the stomach, until about 500 c.c. is used. After remaining a few minutes, it is allowed to flow out through the other tube. Or, a continuous flow may be kept up, allowing 300 c.c. to remain in the stomach throughout the treatment. Within twenty minutes this produces decided reaction from shock. If the temperature is raised to 131° F., it will not only prevent shock, but reduce profound shock when present. Another method is the introduction of small, thin-rubber hot-water bags, covered with flat gauze sponges, into the abdominal cavity during operations. The bags not only prevent shock by the constant heat, but are useful in holding back the viscera.

By injecting the serum of animals in shock into healthy animals, constant results in disturbance of circulation and respiration, and lowering of temperature, were obtained. It has also been demonstrated that animals so injected were much more susceptible to infection. By another series of experiments it was found that when animals were stimulated by heat, applied within the splanchnic area, by the above methods, for one hour or more, immunity, or resistance to infection, was greatly increased, and the serum of such animals injected into other animals produced greater resistance, and partial immunity to infection.

These facts establish one important point in the pathology of shock, namely, the alteration of the tissue-cells and blood. The nerves seem to act as transmitters of impulses, that result in tissue changes. When the phenomena of altered metabolism is more clearly worked out, the phenomena called shock will probably be better explained.

*Atmokaussis: Its Value in the Treatment of Severe and Uncontrollable Uterine Bleedings (Uterine Arteriosclerosis).*

SAMUEL W. BANDLER (*The Phila. Med. Jour.*, March 3, 1901) considers the failures and bad results that have occurred in the use of this method due to one or more of the following reasons: (1) The introduced catheter permitted no outlet for the vapor, so that continued action of the same resulted. (2) The heated metal catheter caused cauterization through direct contact with the cervix and uterus; or, owing to uterine contractions, the tip of the metal catheter cauterized deeply and locally. Dührssen's modifications of the apparatus prevent

these deleterious effects. The uterine tube is made of fiber, which does not transmit heat, is centrally perforated with so large a lumen that there is room around the metal tube passed through it for the outflow of steam and coagulated blood, and the inner metal tube does not anywhere come in contact with the mucous lining of the uterus. Dilatation of the cervix must be a preliminary in all cases, not only to permit of the easy introduction of the tube and furnish subsequent drainage, but also to allow digital examination of the uterine cavity in all cases, previous to treatment.

When menstruation becomes excessive, and myomata, malignant growths, retined placenta or membranes, and local changes in the endometrium are excluded by examination, it may be taken for granted that one of the following conditions is present: (1) Degenerating muscle-fibers, poor in contractile power; (2) increase of fibrous connective tissue; (3) increase of elastic fibers, thickened and brittle; (4) arteriosclerotic vessels. Age is no criterion, for these changes may occur long before the natural climacteric period. If ergotin, stypticin, etc., fail, no pathologic conditions of the adnexa are present, curetting shows no local changes in the endometrium, and yet fails to control the hæmorrhage, then the diagnosis of arteriosclerosis must be made, and for these cases atmokausis is of great value.

Narcosis is not necessary, for the uterus loses its sensitiveness on the contact of steam. As a rule, the cervix is better not treated by this method, but if it be vaporized, care must be paid to prevent atresia. If the entire uterine cavity is to be treated for only a few seconds, the uterine tube is introduced as far as the internal os. Where it is desired to obliterate the uterine cavity, the uterine tube (after measurement of the uterus with a sound) is introduced to within 2 cm. of the fundus. The metal tube is then introduced and moved occasionally during the treatment, to permit the outflow of liquefied steam and blood. The uterus soon contracts, and the uterine tube is gradually withdrawn. The temperature used is 100° C., in the boiler of the instrument, which is controlled by a safety valve and by a stop-cock on the outlet tube. Experimentally it has been found that the steam enters the uterus at a temperature of about 78° C., when the thermometer in the boiler registers 100° C. The application of the steam is from fifteen to twenty seconds in young women where no obliteration is desired; from four to eight minutes if total obliteration is intended. Rest in bed for at least ten days is necessary. One vaginal irrigation may be given after several days if a large serous flow makes the patient uncomfortable. The serous flow often persists for weeks.

The treatment should not be repeated under four weeks. Sometimes irregular bleedings, or one or two increased menstrual bleedings, may occur; the former are the result of the throwing off of necrotic tissue, the latter gradually go on to natural menstruation.

The normal character of the regenerated mucous membrane of the uterus appearing after this treatment is shown by subsequent pregnancies. Its value in subinvolution is illustrated by a case where the uterine cavity was reduced from 12 to 6 cm. in length after vaporization.

#### CANADA.

##### *The Relation of Ovarian Disease to Insanity and Its Treatment.*

A. T. HOBBS, (*The Canadian Practitioner and Review*, March, 1901) says that pathologic lesions of the ovary, disturbing its functioning, result in nerve storms, ranging from the localized abnormal sensations to profound mental derangement, and it is surprising that alienists devote so little attention to ovarian lesions, as factors in the causation of insanity. The interdependence of the mind and the ovaries is shown by the history of forty cases of ovarian disease, with complicating insanity. Only twenty of these patients had borne children, consequently the accidents of maternity did not bear as prominent a part as one would suppose, in causing these ovarian lesions. Forty per cent. of these cases gave a history of hereditary tendency. The diseases were varied, cysts of different types, fibroid degenerations, abscesses, hæmatomas, inflammatory conditions, and prolapse. In twenty-eight cases there were complicating lesions of other pelvic organs. In many of these cases the insanity usually appeared during the onset of ovulation, or a few days prior to menstruation, or chronic maniacal propensities or delusions became exaggerated at this period.

Mania is the most frequent type of ovarian insanity, existing in over 90 per cent. of cases. Sexual delusions were the exception. Even melancholics became excited and talkative at the onset of ovulation.

The usual surgical rules of preparatory treatment were followed as far as possible. The operations varied, according to the complications present. Hysterectomy was performed in seven cases; single or double oöphorectomy in twenty-four cases, while, in the remaining nine cases, a part of one or both ovaries was preserved after the excision of the diseased portion. Two cases died: one from pneumonia, on the twelfth day, the other from septic pneumonia, the ovarian abscess and



pus tube having ruptured during the operation. The rest made rapid physical recoveries. Nineteen made complete mental recovery. Of these, six had been insane under one year; fourteen, between one and two years; one, between two and three years; three, between four and five years, and four, over five years.

Ten others improved, and are still improving. Two epileptics were among the number operated upon, in whom there was no improvement. From the experience gained in these and other cases, the importance of determining the presence or absence of disease of the reproductive organs, in women bordering on insanity, has been impressed upon the writer, and should be insisted upon by all alienists.

---

## OBSTETRICS.

### UNITED STATES.

#### *Physiologic Resuscitation of the Stillborn.*

DANIEL LICHTY (*Jour. Amer. Med. Assn.*, Feb. 9, 1901) says that many cases of asphyxia neonatorum are caused by pressure on the occiput, during its emergence beneath the symphysis, and are as much a traumatism as if occurring in any ordinary accident. The respiratory centers thus suffer injury. The fundamental principles applied to the resuscitation of persons suffering from syncope, due to cerebellar anæmia, or where depletion has occurred from traumatism, apply to the resuscitation of still-born children, viz.: (1) Prompt depression of the upper zone of the body, to favor gravitation of the blood to the dependent cerebellar region and medullary center. (2) The supplying of heat externally.

A small bath-tub or a basin of sufficient size, should always be on hand in a labor case, together with an abundance of warm water. If the child be asphyxiated, the feet and body should be elevated, and wrapped in a warm flannel, while the occiput should be immersed in the warm water, taking care not to allow the water to enter the mouth or nose. An assistant then dashes half an ounce of cold water upon the unsubmerged epigastrium, repeating it once in ten seconds. If a gasp does not follow the first dash of cold water, draw forward the tongue and repeat the procedure. Even a pint of warm water, in which to submerge the occiput, is of use, and can be used, if the cord is short, without severing it. If, while this manipulation is going on, the pla-

centa is expelled, the maternal surface of the placenta may be exposed to the air for the blood-absorption of oxygen, according to Stringer's method; care must be taken lest passive retrograde circulation ensue, and the child become exsanguinated by placental hæmorrhage.

The writer's experience with this method has proved most satisfactory, and he believes it superior to the usual mechanical methods.

### *A Case of Complete Placenta Prævia.*

FREDERICK COGGESHALL (*Boston Med. and Surg. Jour.*, Feb. 14, 1901) was called some distance into the country, to a woman in labor with her sixth child. Knowing nothing about the case, except the message that she was "having a hard time," he took a trained nurse with him. The woman had been in labor for some hours, and had bled continuously and freely. The irregular practitioner who was attending her packed the vagina with gauze, and gave an unfavorable prognosis. He was thereupon dismissed. The patient was extremely pale, only partially conscious, pulse almost imperceptible, pupils widely dilated. The bedding and mattress were soaked with blood, which was still trickling through the gauze. Without stopping for an examination, the subcutaneous injection of decinormal salt solution was at once begun, the solution being injected under both breasts, and the loose skin of the back at the same time, by a three-way tube, contrived for the rapid administration of salt solution. The foot of the bed was raised, and a tenth of a grain of strychnine nitrate given hypodermically. Time was not taken to sterilize the water for the salt solution. When this was under way, the vaginal packing was removed. Through the partly dilated os the placenta could be felt. A rapid manual dilation was performed, tearing the cervix in three directions, the placenta was detached and extracted, podalic version was performed, and the child hastily delivered. A perinæum completely wrecked from previous labors facilitated delivery. The child was still breathing, although blanched, but there was only an ignorant woman to care for it, and it died in half an hour, before either the writer or his professional nurse dared to leave the mother. More salt solution was injected, and several injections of strychnine. A rectal enema of two ounces each of brandy and fluid extract of ergot, in a quart of salt solution, was given. The patient was unconscious, the pulse was imperceptible, although the heart was beating feebly, and respiration had ceased. Artificial respiration was kept up for half an hour, when the pulse could be felt. The uterus, which had received a very hot douche

of 1-1,000 bichloride as soon as empty, and had then been packed with gauze saturated with two ounces of ferri chloride tincture, had contracted at once, and hæmorrhage was over in a few minutes after the child was born. Recovery was slow, but complete. Strange to say, there was no sepsis, and no unusual soreness at the points at which the saline solution was injected. Local inunctions of Credé's ointment were used in those places.

*Ectopic Gestation: Report of Cases.*

J. E. GILCHRIST (*Obstetrics*, March, 1901) reports four cases of ectopic gestation, in each of which the diagnosis was confirmed by operation. One case deserves particular and full mention. The patient was seen by the writer in consultation; previous history as follows: A week before there had been an attack of severe abdominal pain, followed by collapse. A swelling was recognized in Douglas' *cul-de-sac*. The pain persisted for a week, requiring hypodermics of morphine. Examination revealed a large, boggy mass, the size of a child's head, in Douglas' pouch, which reached down in the pelvis. Her pulse was rapid; temperature, 99° F. A diagnosis of ruptured ectopic gestation, with hæmorrhage, was made. Five days later the abdomen was opened to ascertain the condition of the sac, and to see of the general peritonæal cavity was walled off. Finding that the latter was the case, the *cul-de-sac* was opened through the vagina, and a quantity of clotted blood and shreds of embryonic tissue was removed with the fingers. after a thorough irrigation the sac walls were found to be perfectly smooth, and the cavity was packed with iodoform gauze. As there had been no hæmorrhage or rupture of the sac into the abdominal cavity, that incision was closed. The packing in the *cul-de-sac* was renewed once in two days, for two weeks. In a little less than seven months after the operation the patient gave birth to a healthy, full-term boy. She had evidently had both an intrauterine and extrauterine pregnancy, and the existence of the former was not suspected at the time of operation, although the uterus was noticed to be somewhat enlarged. B. B. Brown reported twenty-four such cases in 1881, while Royster noted thirty-seven cases previous to 1890, since which eight cases have been collected by the *Index Medicus*. The condition, then, is not extremely uncommon, and its possibility should be remembered in dealing with cases of ectopic gestation. The danger to the mother is greatly increased.

*Nausea and Vomiting in Pregnancy.*

JOHN M. BATTEN (*The Penn. Med. Jour.*, March, 1901) has found the most satisfactory treatment for this trouble to be persistent feeding, in small quantities, both night and day. Fasting throughout the entire night is conducive to sickness in the morning, and where it is not convenient to have an attendant bring food to the patient during the night, food of some sort, it matters little what it be, should be placed on a table by the bedside, and the patient instructed to eat whenever she awakens during the night. Breakfast should always be served in bed. Persistence in these two simple measures will relieve most ordinary cases of the nausea and vomiting of pregnancy.

*Cæsarean Section for Fibrocystic Uterine Tumor.*

GEORGE L. BRODHEAD (*The Post-Graduate*, March, 1901) reports the case of a primipara, thirty-four years old, who applied for examination at the Post-Graduate Hospital. Her menstrual periods had been regular and normal, and her general condition, since becoming pregnant, had been good. She considered herself between six and seven months pregnant. The fundus reached somewhat higher than would be expected for that period. Vaginal examination disclosed a tumor the size of an orange, of firm consistency, located well down in Douglass' *cul-de-sac*, and pressing the long, soft cervix forward behind the symphysis. An attempt to replace it, with the patient in the knee-chest position, was unavailing, for the mass was adherent to surrounding structures. There was no assurance that the tumor could be removed by vaginal section without inducing premature labor, and the patient was exceedingly anxious to have a living child. She consented willingly to have Cæsarean section performed at term. Accordingly, a few days before the expected time of labor, Cæsarean section was performed, according to the technique described by A. Palmer Dudley. A healthy boy, weighing six and one-half pounds, was delivered in five minutes from the time the operation was commenced. The placenta and membranes were removed manually. The tumor, a fibrocystic growth, was attached to the posterior wall of the uterus by a pedicle an inch and a quarter broad; it was also adherent to the rectum, but the adhesions were easily broken up. The growth was removed, and the site of its attachment to the uterus closed with fine catgut sutures. The cervix was dilated with the finger, from above, to allow of free drainage. The uterine incision was closed with chromi-



cized catgut. On account of some bleeding from torn adhesions a gauze drain was used in the *cul-de-sac*. Recovery was rapid and uneventful. The child lived and did well on modified milk, the mother being unable to nurse it. This case emphasizes the vast importance of a preliminary examination of all pregnant women, for this tumor gave no symptoms, and would probably have been unsuspected until the time of labor, when it would have presented an insurmountable obstacle to delivery, and the performance of Cæsarean section would have been necessary, under much less favorable circumstances.

*Vomiting of Pregnancy; Suspension of Pregnant Uterus.*

J. OSWALD VOGEL (*Boston Med. and Surg. Jour.*, March 21, 1901) reports two cases occurring in the service of Dr. F. W. Johnson, in the Carney Hospital. The first was the case of a single woman, who entered the hospital complaining of constant vomiting for ten days. The vomiting occurred both night and day, without any connection with the time of eating. Bowels constipated, urine normal, no epigastric pain or tenderness, temperature and pulse normal, no blood in vomitus, no signs of pregnancy in the breasts. Rectal feeding was ordered, and rectal injections containing  $1\frac{1}{2}$  grains of cocaine, while by mouth bismuth and oxalate of cerium were given. The vomiting still continued, and vaginal examination showed a softened cervix and blueness of the vagina. As the vomiting persisted for two weeks, in spite of various methods of treatment, the patient was etherized, a positive diagnosis of two months' pregnancy made, and the cervix slowly and carefully dilated to the width of an inch. The cervical canal was thoroughly painted with Churchill's tincture of iodine. The rectal feeding was continued for twenty-four hours, on account of the nausea from ether, but in two days she was able to take and retain solid food, and was discharged in a week, during which time there had been no vomiting. The second case was a married woman, who entered the hospital with a diagnosis, by her physician, of three months' pregnancy, with ovarian cyst. Abdominal incision through the right rectus muscle revealed a cyst of the right ovary, with twisted pedicle, and adherent to the uterus and rectum. The cyst was ruptured in separating the adhesions, and was found filled with inky-looking material. The sac and right tube were removed, the latter being dissected out of the horn of the uterus. The left ovary was also incorporated in the cyst wall, so that it took some time to decide from which side the cyst originated. The diseased portion of this ovary was removed, and the

healthy rim was sewed over and over with catgut. The three months' pregnant uterus was suspended with two sutures of kangaroo tendon, after Kelly's method. The patient was discharged well twenty-three days after the operation, and pregnancy has continued, without interruption or discomfort, up to present writing (two months after the operation).

CANADA.

*A Case of Dystocia from Uterus Bicornis, with Contracted Pelvis.*

K. C. McILWAITH (*The Canadian Practitioner and Review*, February, 1901) was called to see a primipara in labor, who gave the following history of her pregnancy: She had menstruated for three months after the inception of pregnancy, then had missed two periods, then menstruated twice. The last ten weeks of gestation had been without any bleeding.

When seen, the os barely admitted one finger, although labor pains had been active for seven hours. The head presented, but was not fixed in the brim, the breech was in the extreme left hypochondriac region, and where the arch of the back should have been was a large mass extending up into the right hypochondrium. The mass was especially prominent during the pains, doughy in consistency, not resonant on percussion. Ten hours later the membranes ruptured, but the head was still movable above the brim, and the os was only the size of a quarter-dollar. Labor pains continued, but at the end of thirty hours there was little advance in the dilatation, and the patient was exhausted. Under an anæsthetic the os was manually dilated, and a slightly shortened conjugate diameter was recognized. An attempt was made to deliver by Dührsen's method, with the patient in Walcher's position. This failing, version was performed with but little difficulty, and the body delivered. Considerable traction, with the fingers of one hand in the child's mouth and the other over the shoulder, was required to deliver the head. On introducing the hand into the uterus to remove the adherent placenta, it was found that a septum extended down one-third of the uterus. The placenta was in the right cornu, and the child's breech had been in the left. Mother and child did well.

## GREAT BRITAIN.

*Spoon-shaped Indentations in the Skulls of the Newborn and a New Method of Treatment for the Immediate Relief of the Deformity.*

I. M. MUNRO KERR (*The British Med. Jour.*, Jan. 19, 1901) read a paper with the above title, before the Edinburgh Obstetrical Society, in which he stated that the subject had received little attention in England, but that in France the literature was quite abundant. The indentations of the foetal skull may be either spoon- or furrow-shaped. The two forms occur with about the same frequency, and although the ætiology is about the same, the latter is less serious, and seldom gives rise to immediate trouble. The spoon-shaped depressions are usually situated on one or the other of the parietal or frontal bones, in the neighborhood of the anterior fontanelle. The accident usually occurs where the maternal pelvis is flat and rachitic, although not necessarily to an extreme degree. It is most frequent where the pelvic deformity is just sufficient to cause a moderate degree of obstruction to the passage of the head. In the majority of reported cases the delivery has been by traction, either on the head by forceps, or on the trunk in breech cases, or after turning. The indentation is usually caused by pressure of the head against the projecting sacral promontory; but it may be due to undue prominence of the iliopectineal eminence, or rarely to an osseous tumor of the bony canal. Defective ossification of the foetal skull predisposes to the accident. A prolapsed arm, by narrowing the pelvis, may cause it. In forceps cases it is usually not due to the direct pressure from the instrument, but to pressure of the head on the promontory of the sacrum.

The prognosis is usually favorable, the indentations disappearing in a week or two, without giving rise to immediate or late trouble. In some cases the deformity is permanent and without disturbance, while in others there are marked, but varied, nervous symptoms, and the children die. Restlessness, twitchings, convulsions, paralysis and asphyxia have all been noted. Schroeder reported that 34 per cent. of the infants so affected were still-born, and 15 per cent. died from the injury. Exhaust-pumps, cupping-glasses, or the application of an adhesive plaster, and the exertion of traction, have all been advised. Trephining has been performed, with good results. In a case recorded by Boissard, the depression was on the left frontal bone, and the left eye protruded, while the heart action was very feeble. He incised the scalp over the coronal suture, made an opening through the suture, and

passing a sound between the bone and the dura mater, pressed up the depression. The heart's action improved at once, and the child recovered. The writer has used the following treatment in three cases with success. Owing to the resiliency of foetal bones, he found that firm antero-posterior compression of the head caused the indentation to come out with a jerk, producing a sound as when a dent in a felt hat is removed. In one case, seriously impaired respiration was immediately relieved after the removal of the indentation by this operation.

*Nervous Hyperpyrexia following Parturition.*

HOWARD DISTIN (*British Med. Jour.*, Feb. 2, 1901) reports the case of a multipara, who was delivered by forceps of a ten-pound child. No anæsthetic was used. Convalescence was uninterrupted until the sixth day, when she complained of *malaise*, and the temperature rose to 100.4°. The following day it was 102.8°. The lochia was normal, there was no hypogastric tenderness, nor anything to account for the fever. Quinine was given, and on the day following an intra-uterine douche of 1-4,000 sublimate solution was ordered. There was no odor, and only a few shreds came away with the douche-water. A rigor and a temperature of 104° followed. Quinine reduced the fever to 101°, but it rose again to 105.6°. Consultation was sought, and another douche was given, with negative results, but followed by a temperature of 107°. This was verified by two thermometers. The patient's general condition continued good. The temperature pursued an erratic course until the sixteenth day, when it fell to normal, and did not rise again. The points of interest are the long period between the labor and the advent of fever, the total absence of symptoms pointing to sepsis, the occurrence of a rigor after each uterine douche, and at no other time, and the lack of ill-effect upon the patient by the ten days of fever. All these led the writer and the consultant to consider the pyrexia of purely nervous origin.

*A Peculiar Complication in Midwifery.*

JAMES MORE (*The Lancet*, Feb. 2, 1901) was called by a midwife to see a patient who had been in strong labor for twelve hours, without progress. The midwife stated that she could not determine the presentation. Examination proved the lower outlet to be blocked with what seemed a spongy mass, with an opening in the center into which the finger could pass. It was neither the mouth nor the rectum, as



neither jaws or pelvic bones could be reached. On further exploration it was found that the mass was the breech, with the foetal vagina presenting, greatly swollen and congested. The child was delivered, and did well, although the genitals were swollen, discolored and abraded by pressure and the frequent examinations of the midwife.

*Pregnancy and Labor complicated with Ovarian Tumors.*

J. BLAND SUTTON (*The Lancet*, Feb. 9, 1901) says that where an ovarian tumor occupies the pelvis and offers mechanical impediment to delivery, and the case is left to Nature, the foetus almost invariably dies, and the following accidents may happen: (1) Rupture of the cyst, (2) rupture of the uterus, (3) rupture of the vagina, and (4) extrusion of the tumor into the rectum. The first is the common way in which Nature seeks to overcome the difficulty, and if the cyst be thin-walled, and the fluid sterile, the results are not necessarily fatal, but where the tumor has thick walls, and contains dermoid material, the prognosis is grave. Various methods have been employed in dealing with labor obstructed by such tumors—craniotomy, forceps and version—but all must be condemned. The choice of treatment lies between two methods: (1) In the early stage of labor the tumor may be pushed up out of the pelvis, and labor completed, and ovariectomy performed later, when the patient has recovered. (2) The immediate performance of ovariectomy and delivery by forceps, or where the tumor cannot be extracted, the use of a Cæsarean section. Two grave dangers surround the first method, rupture of the cyst and acute twisting of the pedicle, either accident demanding immediate ovariectomy under less favorable circumstances than if it had been elected in the first place. While it is true that these accidents have occurred, and the performance of laparotomy has been postponed without fatal results, the chances should not be taken. It is a well-attested fact that ovariectomy can be successfully performed, even while labor is in progress, the operation in no way interfering with the contractions of the uterus. The liability of the cyst to suppurate must also be remembered, and the rule may be stated that when a puerperal woman known to have an ovarian tumor, even a small one, exhibits unfavorable symptoms, ovariectomy should be performed at once.

Where the existence of an ovarian tumor is recognized early in pregnancy, it should be at once removed. Before the fourth month single or double ovariectomy is attended with an exceedingly low rate of mortality, and the risk of abortion is small. After this period the

danger of abortion increases with each month, but the statistics show that the risk to the woman is not greater than that attending ovariectomy in non-pregnant women.

*The Treatment of Puerperal Eclampsia by Saline Diuretic Infusions.*

ROBERT JARDINE (*The British Med. Jour.*, March 2, 1901), since his earlier reports on this subject, has become more strongly convinced that saline infusions constitute the most important part in the treatment of puerperal eclampsia, and, moreover, that the treatment is based upon scientific principles, aiming to treat the *cause* by diluting and eliminating the toxins.

Five cases, suffering from marked dropsy, albuminuria, and severe headache, were recently treated by saline purges, diuretics, and a milk diet. All passed through the puerperium without convulsions. If the establishment of diuresis is the best preventive method, it is reasonable to suppose that cure can best be accomplished by the same method. But, after eclampsia has begun, absorption by the stomach is almost in abeyance, and the process would be too slow; hence the use of the subcutaneous method. Recently a patient was admitted to the hospital a few hours after delivery under chloroform. She had had about twenty convulsions, and was comatose; urine almost suppressed, and loaded with albumin. Four tablespoonfuls of salts were given through a stomach tube, two pints of saline infusion injected, and a hot pack applied. Six hours later the saline infusion was repeated, and half the former dose of salts given. The kidneys quickly responded, 16 ounces of urine being withdrawn in the first nine hours, and 37 ounces in the first twenty-four hours, while the bowels moved copiously seven times. In the following two days 168 and 212 ounces of urine were collected. She had no convulsions after the second infusion was administered.

Dr. Monro Kerr has collected all the cases of puerperal eclampsia treated in the Glasgow Maternity Hospital during the last fifteen years. Most of the cases are brought in after being in convulsions for several hours. Under the cases treated by chloroform, chloral, bromide, veratrum viride, morphine, etc., the death-rate was 47 per cent. Since saline infusion has been added to the treatment thirty cases have been treated, with a death-rate of only 17 per cent. As to the obstetric treatment of the condition, experience has taught that it is not wise to interfere if labor has not begun. During the first stage of labor dilatation may be left to Nature if the fits cease, but if they recur, the

uterus should be emptied as quickly as possible. Where convulsions occur during the second stage delivery should be effected immediately. All obstetric procedures should be performed under deep chloroform narcosis.

*Notes on a Case of Complete Inversion of the Puerperal Uterus.*

GEORGE ELDER (*The Lancet*, March 2, 1901) reports the case of a young primipara, who was delivered by forceps with but little hæmorrhage. The placenta was easily expressed, and the uterus contracted firmly. The convalescence was uneventful, and the patient was able to sit up after two weeks. Eighteen days after delivery she was taken suddenly ill with abdominal pain and a slight bloody vaginal discharge. There was evidently severe shock. After two days rest in bed she felt better, but the attending physician insisted upon a vaginal examination before allowing her to get up. The uterus was found completely inverted, lying in the vagina. Efforts to replace it were unavailing. The writer was called and advised rest, hot douches, and elevation of the pelvis for a few days, as there were no urgent symptoms. A week later the patient was anæsthetized, the uterus replaced by manual pressure, the vagina packed with iodoform gauze, and the recumbent posture ordered for a week. There was no further trouble. The accident was probably due to irregular muscular action, a slight inversion possibly taking place at the time of labor, which, acting as a foreign body, stimulated the expulsive efforts of the uterus, and this, in time, assisted by the patient getting up soon, completed the process.

*Full-term Pregnancy in a Rudimentary Horn of Uterus; Missed Labor (Five Months) Abdominal Section and Removal of Sac. Recovery.*

J. H. TARGETT (*Transactions of the Obs. Soc. of London*, Vol. XLII., Part IV.) reports the case of a young married woman, who expected her confinement at the end of March, 1900. Early in April she thought herself in labor, as there were severe forcing pains in the abdomen, but there was no bleeding, and the pains subsided. Fœtal movements were no longer felt. In May, a sudden, but not profuse, hæmorrhage occurred from the vagina, which continued more or less for a month. The discharge was dark, but contained no clots or membranes. From that time on there was a gradual decrease in the size of the abdomen and breasts. Her health was excellent and had been

during the entire period. When seen by the writer, in November, 1900, the abdomen appeared about the size of an eight-months' gestation. A hard tumor was felt, slightly more prominent on the right side. The cervix was directed backward, neither softened nor dilated. A sound passed three inches into the body of the uterus, which seemed to be connected with the tumor. The muscular tissue surrounding the tumor gave rise to intermittent contractions, leading to the opinion that it was a portion of the uterus. Abdominal section showed that the abdominal wall was vascular, and firmly adherent to the gestation sac, which contained a full-term male child, with no deformities. The foetus weighed nearly five pounds, but the tissues were shrunk, as if from absorption of fluid. There was no putrefactive odor to the foetus or the placenta, which was attached to the posterior wall of the sac. The appendages on both side were normal. The gestation sac was connected with the main body of the uterus by a very broad pedicle, which was ligated in four sections, and tied by two separate interlocking ligatures. The adhesions were separated, the omentum being tied off in sections, and the entire sac was removed. The raw surface of the pedicle was closed by a continuous suture of the peritonæal edges. The patient made a good recovery.

*A Case of Tubal Abortion in Which the "Mole" was in Process of Extrusion at Time of Operation.*

J. BLAND SUTTON (*Transactions of the Obs. Soc. of London*, Vol. XLII., Part IV.) considers tubal abortion a frequent mode by which tubal pregnancy terminates. In 1896 he reported a case in which the mole was found free in the recto-vaginal pouch, and, on two occasions, in the course of an operation for tubal pregnancy, the mole had slipped from the cœlomic ostium, as the tube was drawn up into the abdominal incision. Last September a woman came to him for operation. She was unmarried, but coitus had taken place shortly after her menstrual period in February. Six weeks later there was a discharge of blood, continuing for two weeks, and recurrent metrorrhagia had persisted since, until she had become extremely anæmic. Her pulse was 120, and her temperature 101°, on admission to the hospital. An indefinite mass, inseparable from the uterus, could be felt in the hypogastric region, and fœtid blood was flowing from the uterus.

On opening the abdomen, numerous clots and a large quantity of fluid venous blood were found, extending as high as the liver. The right tube and ovary were normal. The thickened and enlarged left



tube and ovary were removed, together with an ovoid mass protruding from the cœlomic ostium of the tube. Saline solutions were administered by rectum, and the patient made a good recovery, her pulse and temperature gradually dropping to normal.

Microscopic examination of the mole showed abundant chorionic villi, exhibiting the features of villi found in fragments of placenta which have been retained in the uterus many weeks after labor or a miscarriage.

### *On Subcutaneous Symphysiotomy.*

G. ERNEST HERMAN (*Transactions of the Obs. Soc. of London*, Vol. XLII., Part IV.) points out the advantages of the subcutaneous operation, viz.: Simplicity, rapidity, slight hæmorrhage, the lessened risk of sepsis, and the absence of a large wound and subsequent scar. The only instrument needed, beside the obstetrical forceps, is a tenotomy knife. In most cases it is better to use Champetier de Ribes' bag, for the complete dilatation of the os previous to symphysiotomy; the head can then be delivered in a few minutes after the section of the symphysis. The one risk, at present, inseparable from the operation, is that of injury to the urethra, which is likely to occur when the pubic bones are too widely separated. This must be guarded against by a careful estimate of the relative size of the pelvis and the child. The best results from the operation are to be obtained when it is performed early in labor, before the soft parts become bruised, or the muscular force of the uterus exhausted. Where the diameter of the head opposed to the conjugate exceeds it by more than half an inch, it is not safe to attempt symphysiotomy. Where the history of previous pregnancies shows the existence of a contracted pelvis, repeated examinations should be made during the last two months of pregnancy, for there will come a time when the head can be pressed into the brim only with difficulty. The choice must then lie between the induction of premature labor and the birth of a feeble child, and the performance of symphysiotomy with the delivery of a stronger child, but with the risk of some impairment of control over the bladder. If, before term, it be found that the child's head is increasing rapidly in size, symphysiotomy may be performed at once, or the alternative of Cæsarean section at term must be considered. In seven cases, recently performed by the writer, there was no difficulty in finding or dividing the symphysis pubis. All the patients recovered without any bad symptoms, and none had any difficulty in standing or walking. One patient complained of irritability of the bladder, and, for about two months after the operation she passed

urine involuntarily when she coughed or sneezed, but six months later this latter trouble had disappeared, and merely a slight irritability remained.

*Fatal Rupture of an Aneurysm of the Splenic Artery immediately after Labor.*

J. D. S. NODES and FRANK HINDS (*Transactions of the Obs. Soc. of London*, Vol. XLII., Part IV.) report the case of a woman, thirty-three years of age, who was delivered of her sixth child by a midwife. The vertex presented and the labor was normal in every respect, lasting only six hours. The placenta followed soon after the birth of the child. Ten minutes later she suddenly threw her arms above her head, her face became cyanosed, and she struggled to get out of bed. Her face grew paler, and in fifteen minutes she was dead. She complained of no pain after labor, and there was no history of abdominal trouble.

Coroner's inquest showed the uterus well contracted, viscera all healthy, and no signs of atheroma in the aorta. The peritonæal cavity was filled with blood, with much clotting in the region of the spleen. The splenic artery was divided into several branches, and at the point of division was an aneurysmal sac, the wall of which was torn away from its point of union with the surface of the spleen.

Aneurysm of the splenic artery is rare: it may occur without giving rise to any symptoms, may undergo spontaneous cure, or may suddenly rupture. Where it produces symptoms, they are abdominal pain, melæna, hæmatemesis, sometimes a bruit and a palpable tumor. The writers have collected the history of nine cases, in addition to the one above. In four, rupture of the aneurysm was the direct cause of death. Enlargement of the spleen was noted in only one instance, and there it was probably due to erysipelas, which was the direct cause of death. The etiology is obscure in most cases, although in three cases it may have been softening of the vessel walls, due to inflammatory conditions in close proximity to them.

---

## PÆDIATRICS.

## UNITED STATES.

*Infantile Colic and Colic in Infants.*

H. ILLOWAY (*Phila. Med. Jour.*, February 2, 1901) defines colic as an irregular peristalsis mainly of the small intestines, a contraction of the various muscular coats of the intestinal tract of such violence that the nerve filaments are unduly compressed, and pain results. Colicky pains may accompany inflammation, ulcers or malformations of the intestinal tract, or various affections of the peritonæum, but colic as an entity is a functional disturbance without any pathological basis, and the normal equilibrium is soon restored when the paroxysm is over. This accounts for the fact that infants afflicted with colic continue to thrive. The spasms may occur at long or varying intervals as the result of some omission or commission in the care or feeding of the infant, or they may begin about the third day after birth, and recur with considerable regularity in the intervals until the child is from one to three months old. It is a common saying, and the writer's experience has confirmed it, that boys are more subject to colic than girls.

The causes of colic are: (1) Flatulence. (2) Influences acting through the mother. (3) Indigestion. (4) Refrigeration. In colicky infants the gases developed in the stomach and bowels are either excessive in amount or retained unduly long, exciting exaggerated peristalsis in the effort to dislodge them. This excess of gas may be due to slow chemical changes in process of digestion, to the mother's diet, or to constipation and flatulence on the part of the nursing mother. The remedy which has proved most efficacious in the writer's experience is the milk of asafœtida made from the fresh gum;  $\frac{1}{3}$  to  $\frac{1}{2}$  teaspoonful may be given to young infants, followed in twenty minutes by a second dose, if necessary. The remedy is innocuous, and it is usually taken without resistance. Where the child evidently dislikes the taste, as evidenced by attempts to spit it out, a few teaspoonfuls of warm fennel tea will not only take away the taste, but also hasten the action of the asafœtida. In a few minutes after giving the medicine a discharge of flatus or eructations of gas will follow, giving relief at once.

The use of purgatives by the mother, the eating of pickles or acid fruit, worry, anxiety, fretfulness, sudden anger, or fever and paroxysms of pain may all produce colic in the breast-fed infant.

Indigestion, resulting in colic, may be due either to overfeeding or the administration of improper food. The overfeeding may consist either in giving food at too short intervals or in too large quantities.

The mother's milk may be deficient in quality or abnormal, being too acid or too salt. But the trouble is more frequent in children dependent upon artificial food. While most children do well upon carefully and scientifically prepared foods others do not seem to thrive. Where milk mixtures cause colic the use of fennel or caraway water as a diluent may relieve the trouble. In some exceptional cases milk, no matter how prepared, cannot be tolerated; here meat broths, with the addition of grain water, may be tried. In colic due to these last mentioned causes, or to constipation, a mixture of  $\frac{1}{2}$  ounce of rhubarb and soda mixture, 40 drops of Hoffman's anodyne, and half an ounce of aromatic syrup of rhubarb will act well. For a child four weeks old the dose should be one-half teaspoonful, for younger children 20 drops, while the dose may be increased to one teaspoonful for older children. An enema of warm water and sweet oil will relieve colic due solely to constipation.

The application of dry heat to the abdomen and limbs, together with the administration of a warm decoction of fennel seed, will relieve colic due to chilling. Opiates should rarely be prescribed; if a soothing or hypnotic effect is absolutely demanded a teaspoonful of the following prescription may be given to a child from two to six weeks old:

|                               |                      |
|-------------------------------|----------------------|
| <b>R</b> Chloral hydrate..... | 8 grains             |
| Mucil. G. acac.....           | 1 dram               |
| Lac. asafet .....             | 2 drams              |
| Essent. anisi.....            | $\frac{1}{2}$ dram   |
| Aq. fenicul.....              | 3 drams              |
| Syr. rhei aromat.....         | $1\frac{1}{2}$ drams |

The diagnostic symptoms of simple colic are: Sudden onset of the pain, with complete relief when the paroxysm is over, the countenance resuming its placid expression; coldness of the hands and feet during the attack; the violent movements of the legs, the thighs being repeatedly flexed upon the abdomen; hardness of the abdominal muscles during the pain; sometimes, but rarely, a slight elevation of temperature. In underfed infants there is no kicking of the legs, and there is



a more continuous cry. In colics occurring with grave pathological conditions the infant holds its legs quiet, and the expression of suffering remains on the face even after the acute spasm has passed.

*The Causes and Treatment of Urgent and Serious Conditions in the Newborn.*

SAMUEL WOLFE (*Phila. Med. Jour.*, Feb. 2, 1901) after leaving out of consideration malformations and monstrosities, divides the causes of the above conditions as follows: (1) Premature birth; (2) plural births; (3) pressure on the umbilical cord; (4) pressure on the head; (5) pressure on the thorax; (6) toxic conditions of the foetal blood, due to emotional or somatic states in the mother during parturition; (7) essential conditions in the foetus, such as hereditary diseases.

The first point in treatment is the establishment of respiration and circulation. If simple methods fail, traction on the tongue, dilatation of the sphincter ani, or mouth to mouth inflation may be tried. The Sylvester method, changing later to the Marshall Hall method of artificial respiration, may be practised without cutting the cord, while Schultze's method requires separation. After respiration and circulation are established as fully as possible, the child may be rubbed all over with clean lard, and a soft clean cloth will remove lard and smegma together. No bathing or washing, beyond a cleansing of the eyes, should be allowed in the case of a feeble child. Great care must be taken to prevent chilling. For premature infants some form of an incubator is desirable. Never attempt to dress such an infant. A thick layer of absorbent cotton, wide enough to envelop the child, and reaching from the arm pits to the thighs, may be laid on the bed; over this, at right angles, four narrower layers are placed, two above and two below. Lay the child on this, bring the two upper narrow layers forward over the scapular regions, then bring the large layer around the body and fasten lightly in position with a bandage or tape. Wrap each leg and foot in one of the lower narrow layers, then envelop the arms separately. By removing soiled tufts of cotton and replacing them by others, the child is kept clean without undue disturbance. Hot-water bottles or bags furnish heat. If the child is too feeble to nurse breast milk or a mixture of whey and milk may be given in small quantities with a medicine dropper. Where, later on, the child's respiration is moaning or sighing, pulse feeble and skin and lips either ashen or cyanotic, atropia or nitroglycerin is the best stimulant:

$\frac{1}{3000}$  to  $\frac{1}{2000}$  of a grain of the former may be given, and  $\frac{1}{20}$  of a drop of the 1 per cent. solution of nitroglycerin. Either one or the other, or a dose of each, may be given, and the dose may be repeated from two to six times in the next twenty-four hours, according to the effect.

*The Woolen Yarn Truss in Infantile Hernia.*

E. S. BOLAND (*The Boston Med. and Surg. Jour.*, Feb. 14, 1901) says that although this homemade affair has been before the profession thirteen years, since first described by Pye, in 1887, it is not as widely known as it should be. It has much to recommend it in the first year, when the delicate skin and flesh is liable to mechanical injury or irritation. It can be made to measure at the bedside, duplicated at a cost of a few cents, must be worn day and night, even in the bath, and removed and replaced by a fresh one when wet or soiled.

Before applying it be sure that the hernial protrusion is slowly and thoroughly replaced, and exclude cases of undescended testicle or encysted hydrocele of the cord. The truss must be adjusted so as to retain the hernia, and yet not be so tight as to chafe. Measure with a tape the distance around the child on the plane of the pelvic inlet, beginning with and coming back to the hernia, then carry the line down on the perinæum, up and out in the gluto-femoral crease, and almost to where it would touch the girdle portion. Mark this length on a piece of board, or a door or window casing, at each end drive a nail in half-way to the head. Over these nails wind thirty or forty strands of worsted, just tight enough to keep from kinking. Remove the skein, tie in the loose ends, and at one end loop a foot of white tape. Carry the truss around the child, with the long end at the affected groin, pass this longer end through the other loop, draw the long end down under the corresponding thigh, and out and up in the gluto-femoral crease, and tie the tape to the girdle. The double and twisted wool is so elastic that it will adapt itself to the motions of the child. Except strangulated hernias, which fortunately are rare in infants, many hernias, retained by some simple apparatus, are cured; the empty sac collapsing is obliterated after a time by the accumulation of fat, the adhesions of its walls, etc. The use of this truss must be coincident with general measures to reduce intra-abdominal pressure to insure the best results.

*A Plea for the Earlier Recognition of Squint in Children by the Family Physician, and the Earlier Application of the Methods of Treatment.*

C. A. VEASY (*The Penn. Med. Jour.*, March, 1901) says that the period of the first recognition of squint in children is usually about the fourth year, when the child begins to make accommodative effort in looking at pictures, etc. Some cases are, however, congenital or are acquired during the first few weeks of life. If the trouble be neglected in most cases the squint will become permanent, and a portion of the visual acuity of one eye may be lost. On the other hand, the early institution of proper treatment will do much toward relieving the deformity and avoiding the many neurotic ailments to which eye-strain frequently gives rise, and will also preserve the useful vision of both eyes, if it be present.

The first point to determine is the presence of any error of refraction. This can readily be done with the ophthalmoscope, or 1 drop of a solution of atropine (4 grains to the ounce) may be instilled into each eye, night and morning, and the child protected from strong light. If the squint improves or disappears under this procedure, an error of refraction is present, and proper glasses must be worn as soon as the child is old enough to keep them on.

In addition to glasses orthoptic exercises should be employed. The apparatus required is an ordinary box stereoscope, with a series of double pictures. The child is first taught to recognize both pictures on the card, or to see double, showing that both eyes are used at the same time, and after this to fuse the two pictures into one. In cases of residual squint after operation this is of great value; so also in cases of low degree, benefited by the wearing of glasses.

Should the squint persist in spite of glasses and exercises, tenotomy of one muscle, or an advancement of its opponent, or both, must be performed when the child is from five to six years old. In a few cases an earlier operation seems advisable.

*A Study of Congenital Sarcoma of the Liver and Suprarenal.*

WILLIAM PEPPER (*The Amer. Jour. of the Med. Sciences*, March, 1901) reports a case recently seen by him, and gives a history of five other cases similar in history. The family history of his case was as follows: Mother suffers only from indigestion, has borne seven children, of whom six are living. The father was insane seven years before

this child's birth, and still has occasional visual hallucinations; denies syphilis. One grandparent on either side died of kidney trouble. This child seemed well until nearly four weeks old, when the navel began to protrude; the next day the whole abdomen was enlarged and shiny, and continued to grow rapidly. The child lost some flesh, was thirsty, bowels loose and green, slight colic at times, no appreciable fever. When five weeks old the tense distended abdomen gave the sensation of a firm resistant growth from the costal border to one inch below the umbilicus, in the median line. In the right iliac fossa the growth filled the whole area, and had a sharp border, unquestionably liver. The child died in convulsions when six and a half weeks old. There was never any jaundice. The autopsy showed the lungs to be slightly congested, heart normal, spleen small and soft, kidney and left suprarenal normal. Right suprarenal enlarged, firm, and hæmorrhagic in appearance. There were no adhesions. The liver weighed two pounds and eight ounces, and was uniformly enlarged in all its lobes. The capsule was smooth and glistening, mottled red and yellow. Section of both the suprarenal and liver presented a uniform yellowish-white appearance, with small hæmorrhagic areas. It was difficult to find any normal hepatic tissue showing acini. Microscopical examination showed the tumor to be a typical lympho-sarcoma. There was a remarkable similarity in all of the cases, in the following points: (1) The age at which the first symptom—swelling of the abdomen—appeared varied from birth to five weeks. (2) The malignancy was marked, the infants dying in from ten days to sixteen weeks. (3) The rapidity of the growth. (4) The sex of one case is not given, the others were females. (5) Clinical symptoms. Distention of the abdomen in every case; while ascites, jaundice, or pigmentation were never present. No fever, and but little pain. All nursed well until shortly before death. No history or signs of syphilis obtainable. (6) The character of the growth was identical. (7) The extremely hæmorrhagic condition of the suprarenal growth. (8) No other organ or part of the body was involved by the new growth.

These six cases have another point of interest, beside their similarity to one another, viz.: They are dissimilar to all other reported cases of either primary sarcoma of the suprarenals or of the liver; no other cases showing the infiltrating character of the growth found in each of the above cases, and none presenting the same clinical features. The writer has carefully tabulated the details of forty-six reported cases, showing the various points in which each differs from his group of six cases. It is evident that none of the group could have been due to



a possible syphilitic affection, for: (a) There was no overgrowth of connective tissue in any of the tumor masses. (b) There was no amyloid change in any organ. (c) There was no hepatitis or jaundice, or enlargement of the spleen. (d) There was little, if any, pain in the region of the liver. (e) There was no nephritis. (f) The tumors were markedly hæmorrhagic.

*Persistence of Symptoms after Removal of Adenoids and Tonsils:  
Their Causes.*

F. HUBER (*Pædiatrics*, March 1, 1901) says that while speedy and complete relief follows in many cases the removal of adenoid growths, there is sometimes a persistence of unpleasant symptoms, trying alike to the patient and to the physician. A consideration of the varied causes giving rise to mouth breathing may show reasons for the continuance of this symptom. While adenoids are the leading cause, any obstruction in the nasal passages, such as narrow anterior nares, deflection, thickening or inflammatory conditions of the cartilaginous septum, hypertrophy of the turbinates, deflections of the bony septum, nasopharyngeal catarrh, or foreign bodies, may all be classed as causes, and require appropriate treatment before complete cure can be expected.

In cases where night-terrors, incontinence of urine, or the symptom complex of "aproxexia" have been present, the relief obtained by the removal of adenoids is rarely marked at first, but if a tonic roborant treatment be instituted after the operation, and the *morale* of the patient improved, decided improvement will be noted after some weeks. Associated nasopharyngeal catarrh may be treated by the application of boric acid ointment applied with an applicator wrapped with absorbent cotton, and by the use of warm salt solution allowed to flow slowly from a nasal cup. Syr. fer. iodid. in appropriate doses, should be given persistently for at least six months following the operation. Occasionally it is necessary to teach children, in a systematic way, how to breathe through the nose by firmly compressing the lips for a few minutes several times daily. Massage of the facial muscles or tying up of the jaw may be necessary where mouth breathing continues as a habit. Where the *ali nasi* are pinched, and the anterior nares and nasal passages are contracted, the prognosis is not good unless the case is attended to at an early age, for stenosis at the orifice and along the nasal passages is not relieved by the removal of the adenoids or tonsils.

*The Treatment of Burns in Infancy and Childhood.*

CHARLES WARREN ALLEN (*Pædiatrics*, March 15, 1901) says that burns in children are usually due to hot water, or contact with hot-water bottles. It is sometimes difficult to make the differential diagnosis between burns and some forms of pemphigus or even of hereditary syphilis. In milder degrees of burn the lesions are erythematous, but if the surface involved is great the prognosis in these cases is grave.

The first effect of a severe burn is to produce sudden vital depression and shock. Aromatic spirits of ammonia in appropriate doses will relieve this condition. Unless the child is very young opium may be employed to relieve pain and quiet the system. As a local application, a 1 per cent. watery solution of picric acid gives almost immediate relief from pain, and healing occurs rapidly with its use. After coating the surface once or twice with this solution apply a thin layer of dry absorbent cotton, over this some impervious tissue, then more cotton, and over all a loose bandage. In subsequent dressings the layer of cotton next the skin should not be removed, but simply wet with the picric solution, and the dressings applied as before. Iodoform is dangerous, especially in young infants, and the other antiseptic dusting powders are apt to cake or harden, and cause irritation.

The pain in erythematous areas is relieved by local baths containing nitrate of potash or bicarbonate of soda in saturated solution. Raised water blisters may be carefully cut away at the edge, and dressed with cotton soaked in either of the above solutions, to which a little glycerine is added.

In deep and extensive burns a permanent bath offers the best means of securing comfort and preventing a fatal issue. It is well to brush over the surface of exuberant granulations a strong solution of nitrate of silver.

"Carron oil," to which some antiseptic, such as thymol (1-1,000) or carbolic acid (1-500), or orthoform (1 per cent.) has been added, is soothing and easily obtained.

An important point is to refrain from removing the entire dressing. The thin layer of gauze or cotton next the wound must not be removed, but the application, solution, oil or ointment should be applied over and through the dressings. In this way the chances of subsequent infection are greatly lessened, as well as the mechanical irritation.

*Cerebro-spinal Meningitis (Weichselbaum, Jaeger) treated by Repeated Lumbar Puncture.*

HENRY KOPLIK (*Medical News*, March 23, 1901) says that there are to-day recognized two distinct groups of cases of this disease, one of severer type and more fatal character, usually complicating or occurring with lobar pneumonia or bronchopneumonia, caused by the *diplococcus pneumoniae*. The primary affection, however, of cerebrospinal meningitis, if the results of recent investigations be accepted, is caused by the intracellular diplococcus of Leichtenstern, Weichselbaum and Jaeger, the *diplococcus meningitidis*. The important question to be settled is the possibility of the sporadic occurrence of the disease. It is scarcely epidemic in the same sense as the exanthemata, and it is rare that several members of the same family are attacked. The disease is epidemic, rather, in the sense that groups of cases occur in different parts of the same city or town at one time or at one season of the year. If there is the isolated occurrence of a small number of cases, coming from streets widely separated and extending over a number of months, they may be fairly called sporadic.

Of the 111 cases reported and carefully studied by Councilman, 29 occurred in children below the tenth year of life. The writer reports 5 cases admitted to the hospital between April and October, 1900. Two occurred at the same time, but had no relationship to one another, and came from widely separated parts of the city. The youngest was eight months, the oldest twelve years of age. The symptoms of invasion in the older children were much the same; headache, vomiting, fever, chills, rigidity and pain in the neck and back, delirium and stupor. The infant's symptoms were different. Six days before entering the hospital it had an attack of conjunctivitis, with a purulent discharge, followed three days later by fever and a discharge from the nose; one convulsion followed, after which the child passed into a comatose condition, remaining so until death, which occurred six days after admission.

In all of the children there was rigidity of the muscles of the neck, with pain on any attempt at straightening the same. Opisthotonus was present in two cases. The plantar reflexes were present, and in some instances were increased late in the disease. Babinski's sign was absent in every case; Kernig's symptom present in every case but one, and persisted into convalescence. Diplococci were found in the discharge from the infant's eyes and nose, and in pus from an abscess which formed on the foot of one child. Unilateral facial paralysis

occurred in two cases. In none of the cases were there definite signs of pneumonia. The respirations, however, were increased. The pulse was markedly irregular.

*Treatment.*—The general treatment is directed to eliminating the poison, and, if possible, to limiting the exudate. Iodide of potassium in very liberal doses is helpful in these directions. Sponging and baths at a temperature of 105° F. gave comfort. The ice-helmet for headache, hypnotics in delirium, and calomel to counteract the constipation were used. In this series of cases the practice of repeated lumbar puncture to relieve the symptoms due to the accumulation of exudate in the subarachnoid space, and about the brain and cord, was systematically observed. The mechanical relief of conditions of increasing pressure, and the diminution of the gross amount of infectious material, is as certainly indicated in this disease as in a pleurisy with effusion.

The lumbar puncture was made, with every antiseptic precaution, when the symptoms demanded it. The indications for it were continuous headache, with periods of alternating somnolence and delirium, repeated chills with a sharp rise of temperature, increasing or continued coma, increase in the rigidity of the neck. If immediate improvement followed, the operation was not repeated unless there was an exacerbation of the symptoms. In some cases the fluid was under great tension, and flowed from the cannula with a spurt. In the case of the infant no relief was afforded by the lumbar puncture, but in the others the improvement was marked. The pain and delirium was relieved, and the temperature lowered. There was no marked effect on either the pulse or respiration, so that in those cases where respiration ceases shortly before death, while the heart continues its action, nothing can be hoped for from lumbar puncture.

The five cases were punctured fifteen times, and fluid varying in amount from 3 to 50 c.c. was withdrawn at each puncture. The dates of puncture varied from the fifth to the thirty-seventh day of the disease. All of the specimens withdrawn contained pus except one, diplococci meningitidis were found in all but two specimens. The fluid was usually turbid, sometimes thick and purulent. There was complete recovery in all of the cases except the infant. It is too soon to state to what extent the prognosis is favorably influenced by this procedure, but it certainly relieves symptoms which may be fairly traced to toxæmia and pressure, and the writer feels that it will ultimately take a place with aspiration of the pleural cavity as a curative method.



*Acute Otitis Media and Acute Mastoiditis in Scarlet Fever, Measles and Diphtheria.*

ARTHUR B. DUEL (*Med. Review of Reviews*, March 25, 1901) gives a clinical report based upon more than 6,000 cases studied at the Willard Parker and Riverside hospitals. A study of the statistics shows that about one in five in scarlet fever, one in ten in diphtheria, and one in twenty in measles will be likely to develop acute purulent otitis.

In otitis, complicating scarlet fever, the discharge usually comes on about the second or third week of the disease, is of a severe type, causing destruction of the tympanic structures and involvement of the mastoid cells. Its occurrence should always be suspected when a sudden rise of temperature occurs after the acute symptoms of the disease have subsided. Pain or uneasiness in the ear may be marked, or the discharge may be the first evidence of trouble.

In diphtheria and measles the otitis is more liable to come on during the acute stage of the disease, when fever is always present, and aside from inspection, pain or a discharge in the meatus are the prominent symptoms. Where measles appears in combination with either of the other diseases the trouble is serious, 50 per cent. of such cases developing a violent double otitis which often involves the mastoid cells in spite of early and vigorous treatment. Where the mastoid is involved there is usually deep-seated pain and a moderate rise in temperature, with tenderness over the mastoid antrum. In children under five it is the invariable rule to find a post-auricular swelling, due to the escape of pus through the Rivinian segment. This swelling may occur in cases up to the age of ten years, but post-auricular swelling in a child of twelve, or older, is more likely due to inflammation in the external auditory meatus. A symptom invariably present in all cases is a marked swelling or sagging of the supero-posterior segment of the auditory canal wall in close proximity to the membrana tympani.

Daily inspection of the tympanic membrane should be practised, and the daily sterilization of the canal by irrigations of 1-1,000 bichloride of mercury solution is advised in order to avoid infection in these cases where spontaneous rupture occurs without warning symptoms. Where the otitis is recognized in time it is better to incise the membrane, for the canal can be previously sterilized and the danger of infecting the middle ear is thus lessened, while the free drainage results in a quicker cure. After spontaneous rupture it is usually best to enlarge the opening.

Where the case can be seen frequently the introduction of a sterile gauze wick in the canal up to the opening in the membrane tympani, with a large gauze dressing on the outside to promote capillary action, is better than syringing. Where close attention is impossible it is well to syringe the ear with a solution of 1-5,000 of bichloride of mercury often enough to keep the meatus sterile and free from pus. In mastoid involvement, early removal of the whole mastoid process is recommended. Where there is no post-auricular abscess, it is the writer's custom to carry the incision from the membrana tympani through the sagging portion of the canal lying over the mastoid antrum to the bone, and apply an ice-coil over the mastoid. This should not be kept on longer than twenty-four hours, unless marked improvement follows, when it may be allowed to remain another day, but no longer. This may limit the disease where the infection is by staphylococci only. In cases of streptococcic invasion early and radical operation is urged, as the ultimate audition is better than when the operation is postponed. This suggests the importance of a bacteriological examination in all cases.

---

## ITEMS OF INTEREST.

PROGRAMME OF THE TWENTY-SIXTH ANNUAL MEETING OF THE AMERICAN GYNÆCOLOGICAL SOCIETY, CHICAGO, MAY 30, 31 AND JUNE 1, 1901.

*First Day. Thursday, May 30th.*—Address of welcome, by Fernand Henrotin, M.D., of Chicago. Response by the president. "Pulmonary Lesion Following Anæsthesia," by Reuben Peterson, M.D., of Chicago; "Intra-ligamentous Cysts. Their Diagnosis and Treatment," by Chauncey Palmer, M.D., of Cincinnati; Clinical Observations on Uterine Fibroid Tumors and Their Treatment," by W. Gill Wylie, M.D., of New York; "Improved Technique in the Surgical Treatment of Uterine Myomata," by William H. Wathen, M.D., of Louisville; "Painful Menstruation as a Factor in Determining the Character of Operations on the Uterine Appendages," by Philander A. Harris, M.D., of Paterson; "The Status of Menstruation," by Eugene C. Gehrung, M.D., of St. Louis; "The Age of First Menstruation in American Women," by George J. Engelmann, of Boston; "Cancer of the Body of the Uterus," by J. Montgomery Baldy, M.D., of Philadelphia; "The Status of Hysterectomy for Uterine Cancer," by Cyrus A. Kirkley, M.D., of Toledo (discussion opened by Drs. Janvrin, Van De Warker and Kelly); "The Cure of Prolapsus and Procidentia of the Uterus," by Henry T. Byford, M.D., of Chicago; "A New Prolapsus Operation," by George M. Edebohls, M.D., of New York; "Pus in Abdominal Operations," by Hunter Robb, M.D., of Cleveland.

*Second Day. Friday, May 31st.*—"Extirpation of the Bladder in the Female for Cancer," by Matthew D. Mann, M.D., of Buffalo; "Extirpation of the Urinary Bladder," by J. Wesley Bovée, M.D., of Washington; "Shock from a Clinical Standpoint," by Eugene Boise, M.D., of Grand Rapids; "Resections and Exsections," by Fernand Henrotin, M.D., of Chicago: the President's Address at 11 o'clock. "Discussion on Cæsarian Section": (1) Indications as Furnished by Contractions of the Pelvis," by J. Whitridge Williams, M.D., of Baltimore; (2) "Circumstances Which Render the Elective Section Justifiable in the Interest of the Child Alone," by Edward Reynolds, M.D., of Boston; (3) "Choice of Technique, Including Indications for Extirpation of the

Uterus," by Matthew D. Mann, M.D., of Buffalo; (4) "The Place of Symphyseotomy as Contrasted with Section," by Charles Jewett, M.D., of New York. General discussion opened by Drs. A. P. Dudley, Cragin, Webster, Hirst, Boldt and Edgar.

*Third Day. June 1st.*—"The Relative Merits of Bipolar Version with Slow Extraction and Accouchement Forcé in the Treatment of Placenta Prævia," by Henry D. Fry, M.D., of Washington; "Injuries of the Head in the New-born," by Andrew F. Currier, M.D., of New York; "Scratch Marks on the Waxtipped Bougies in the Diagnosis of Ureteral and Renal Calculi," by Howard A. Kelly, M.D., of Baltimore; "Vaccinations in Shape and Density of the Normal Uterus, Gravid and Non-Gravid," by Robert L. Dickinson, M.D., of New York; "Tetanus After Cœliotomy, with Report of Two Cases," by Henry C. Coe, M.D., of New York; "Observations on Some Cases of Tuberculous Kidney Treated Surgically," by Beverly MacMonagle, M.D., of San Francisco; "Myomectomy During Pregnancy, with Delivery at Full Term," by J. Duncan Emmet, M.D., of New York.

*In Memoriam.*—Samuel C. Busey, M.D., LL.D., by Joseph Taber Johnson, of Washington; Horace Tracy Hanks, M.D., LL.D., by Joseph E. Janvrin, of New York; Alexander J. C. Skene, M.D., by Robert L. Dickinson, of New York; Sir William Overend Priestley, M.D., LL.D., by W. S. Playfair, of London.

---

AMERICAN PÆDIATRIC SOCIETY. PRELIMINARY PROGRAM.

The society will hold its thirteenth annual meeting at Niagara Falls, May 27, 28 and 29, 1901.

*Monday, May 27th.*—Address by the President, by Wm. D. Booker, M.D., Baltimore; "A Case of General Arterio-Sclerosis in a Boy, Aged Ten Years" (specimen and slides), by Allen Baines, M.D., Toronto; "Pernicious Anæmia in Infancy" (preliminary report of a case), by T. M. Rotch, M.D., Maynard Ladd, M.D., Boston; "A Case of Hæmorrhagic Nephritis Complicating Influenza in a Thirteen Months' Old Baby," by D. J. Milton Miller, M.D., Philadelphia; "An Account of an Epidemic of Malaria in Children," by Rowland G. Freeman, M.D., New York; "Congenital Absence of the Abdominal Muscles, with Distended and Hypertrophied Urinary Bladder in a Child of Six Years," by William Osler, M.D., Baltimore; (a) "Amaurotic Family Idiocy," (b) "Monster," by A. C. Cotton, M.D., Chicago; "A Note on the



Little Finger of the Mongolian Imbecile and of Normal Children," by J. Park West, M.D., Bellaire, O.; (a) "Maternal Impressions" (report of cases), (b) "Hare Lip," by B. K. Rachford, M.D., Cincinnati; "The Pathological Anatomy of Cretinism," by Frederick A. Packard, M.D., and Alfred Hand, Jr., Philadelphia.

*Tuesday, May 28th.*—"Glass Sun Rooms on City Roofs or Winter Playhouses" (illustrations), by William P. Northrup, M.D., New York; "Milk Sugar," by A. Jacobi, M.D., New York; "The Feeding of an Incubator Baby," by Charles W. Townsend, M.D., Boston; "The Place of Cereals in Infant Feeding," by Henry D. Chapin, M.D., New York; title to be announced, by A. Seibert, M.D., New York; "A Study of 571 Cases of Summer Diarrhea," by Charles Gilmore Kerley, M.D., New York; title to be announced, by F. Huber, New York; "The Visceral Lesions of the Erythema Group of Skin Diseases in Young Children," by William Osler, M.D., Baltimore; "The Use of the Term Exanthem," by F. Forchheimer, M.D., Cincinnati; "An Analysis of Thirty-two Cases of Congenital Heart Disease," by John Lovett Morse, M.D., Boston.

*Wednesday, May 20th.*—Business meeting (for members only); "A Case of Pulmonary Gangrene in a Baby," by Walter Lester Carr, M.D., New York; "A Case of Arsenical Poisoning in an Infant of Six Months," by John Lovett Morse, M.D., Boston; title to be announced, by George N. Acker, M.D., Washington; "Measles Complicated by Appendicitis," by Harold Williams, M.D., Boston; "Bulbar Symptoms in the Newly Born," by Irving M. Snow, M.D., Buffalo; "Cyclical Albuminuria, with Report of a Case," by Frank Spooner Churchill, M.D., Chicago; "Great Fluctuations in Temperature in the Terminal Stage of Pulmonary Tuberculosis," by Samuel S. Adams, M.D., Washington; "The Treatment of Tuberculosis," by B. K. Rachford, M.D., Cincinnati; title to be announced, by C. P. Putnam, M.D., Boston.

SAMUEL S. ADAMS, M.D.,

*Secretary.*

*1 Dupont Circle, Washington, D. C., May 1, 1901.*

THE  
AMERICAN GYNÆCOLOGICAL  
AND  
OBSTETRICAL JOURNAL.

---

JUNE, 1901.

---

CANCER OF THE UTERINE FUNDUS.\*

BY J. M. BALDY, M.D., PHILADELPHIA, PA.

Carcinoma in any part of the body is so well known for its virulence that there can be no surprise at the results of this disease recently reported from so many sources where the uterus has been the organ attacked. For so long a time we were fed from foreign sources, especially from Germany with reports of 40, 50, 60 and even 70 per cent. of cures of operation in cancer of the cervix that more candid men and more careful clinical observers first doubted their own observations and then feared publicly to contrast such an overwhelming report of optimistic results with their own comparative bad and totally opposite ones. The truth will out, however, and to-day it is a bold man who will set up claims of such results. The facts are that operations of any and all kinds have proven a dismal failure as far as securing a cure is concerned in cancer located in the cervix uteri. The proportion of permanent cures is probably as low as or below 5 per cent. This lamentable condition is due in part to many causes, a discussion of which I propose to take up at another time and place, for the present confining my remarks to cancer of the fundus, a much more rare location for the disease, unfortunately, than in the cervix. I presume it must be admitted that carcinomas of the same variety are intrinsically much the same as far as the disease itself is concerned. But the location of the disease renders the practical aspect of the case widely different: and of all portions of the body in which it is safest for cancer to occur, if the word safe may be used

---

\* Read before the American Gynæcological Society, May 30, 1901, Chicago, Ill.

in this connection at all, the fundus uteri is that portion. It is with the object of calling the attention of the profession to and emphasizing as emphatically as possible the wide practical difference between cancer of the cervix and cancer of the fundus that this paper is presented. It has been said "that" practically all cases of cancer of the cervix, whether operated upon or not, eventually die of the disease: practically all cancers of the fundus if operated upon and recover, remain well." As exaggerated as this statement may appear, there is more truth in it than one is at first willing to admit. Certainly if I take my own experience into consideration, I am unable to gainsay it. When it first began to dawn upon me that there was a fairly considerable difference in results after operation in cancer in these two different localities I thought it must surely be accidental. As experience increased and the cases were followed up and their condition years after the operation was noted it became more convincing, until finally all doubt of an element of chance was dissipated and the contrasted difference stood plainly revealed. A careful scrutiny of recent writings on this subject has shown me that other surgeons were also having the same results. In 1889 Penrose reported from his service at the University of Pennsylvania and the Gyneccean Hospital, eleven cases of cancer of the fundus uteri, seven of which he had removed; in no case was there recurrence. In the same paper he incidentally says that his results in cancer of the cervix had been most unsatisfactory and is only able to find two or three of his former patients who had suffered with this disease alive at the time of writing.

Cullen, in his book on "Cancer of the Uterus," analyzes the cases and results obtained in Johns Hopkins Hospital. There has been in all 30 cases of cancer of the body operated upon, with the result of over 66 per cent. of non-recurrence. Only five cases have been seen which were considered inoperable. On the other hand 73 cases of cancer of the cervix were operated upon, with non-occurrence in about 20 per cent. only. It is noted, however, that there were 68 cases of cancer of the neck upon whom no operation was performed, which, of course, reduces the mortality to about 10 per cent. And this probably does not tell the whole truth as to the per cent. of cancer of the neck which can be saved. One has to allow for any mistakes in diagnosis—none of which would have recurrence, and all of which would be classed with those yet alive. And then sufficient time has not yet elapsed in the later ones to tell how many will yet have a recurrence. Altogether the statistics of this institution show an es-

estimated saving of 5 per cent. or less of cancer of the cervix applying for relief. With all allowances being made the results as reported from the above institution accord pretty closely with my own experience in Philadelphia at the Gynecean, the Polyclinic and the Pennsylvania Hospitals. I have had pass through my hands 24 cases of cancer of the body of the uterus. Of these cases three were either too far advanced for operation or refused operative assistance; two died within six months or a year, the third one being alive but dying. Upon the remaining 21 cases hysterectomy was performed; a few of the early ones by vaginal hysterectomy, a number of the very stout ones by the combined abdominal and vaginal method, the balance by the abdominal route. Two of the 21 cases died from the operation. Of the 19 remaining cases all are alive and well to-day with two exceptions. One of these died of pneumonia seven years after operation. I strongly suspect from the reports I have from the other one that she has recurrence. Of course, some of these cases are too recent to be able to report surely, but taken as they stand (and as the ones of Kelly and Penrose are taken) in the neighborhood of 75 per cent. are saved. On the other hand my experience with cancer of the cervix, be it squamose-cell or admo-carcinoma, is most discouraging; with few exceptions they are all dead or dying. After allowing for possible mistakes in diagnosis in the very early and suspicious cases, taking into consideration those rejected as too late for operation, I am unable to place my hands on 5 per cent. of patients applying to me for relief of cancer of the cervix uteri alive and well to-day. It is true an occasional miraculous exception occurs, but in the main, the fate of them all is the same.

The following 21 cases, a fairly large experience for one man to have, and which shows how comparatively rare the disease is in this part of the uterus, is recorded.



| Initial. | Date.       | Operation.             | Result.   |   |
|----------|-------------|------------------------|-----------|---|
|          |             |                        | Immediate | Final   |
| 1 E.     | Oct., 1891  | Vaginal Hysterectomy.  | Died.     | Septicæmia.   |
| 2 J.     | Jan., 1892  | " "                    | Recovery. | No signs of recurrence.                             |
| 3 S.     | June, 1892  | " "                    | "         | Well when last heard from 2 years ago.              |
| 4 R.     | Sept., 1892 | " "                    | "         | Death from pneumonia 1 year ago.                    |
| 5 B.     | Oct., 1892  | " "                    | "         | Alive. No recurrence.                               |
| 6 G.     | Nov., 1892  | " "                    | "         | " "   |
| 7 B.     | Dec., 1892  | " "                    | "         | " "   |
| 8 T.     | Apr., 1893  | " "                    | "         | Alive. Is having symptoms suspicious of recurrence. |
| 9 L.     | Apr., 1893  | Abdominal hysterectomy | "         | Alive when heard from 2 years ago                   |
| 10 W.    | Mar., 1894  | " "                    | "         | Alive. No recurrence.                               |
| 11 I.    | Sept., 1895 | " "                    | "         | " "   |
| 12 K.    | " "         | " "                    | Died.     | Septicæmia.   |
| 13 D.    | Oct., 1896  | Abd. and Vag.          | Recovery  | Alive. No recurrence.                               |
| 14 T.    | Mar., 1897  | " "                    | "         | " "   |
| 15 H.    | May, 1897   | " "                    | "         | " "   |
| 16 S.    | Apr., 1898  | " "                    | "         | " "   |
| 17 D.    | Sept., 1898 | " "                    | "         | " "   |
| 18 G.    | May, 1899   | Abdominal              | "         | " "   |
| 19 W.    | June, 1900  | " "                    | "         | " "   |
| 20 S.    | Nov., 1900  | Abd. and Vag.          | "         | " "   |
| 21 H.    | Feb., 1901  | Abdominal              | "         | " "   |

Of the 24 cases of cancer of the fundus uteri which have applied to me for treatment, three refused operation and died, and two of them at least came in sufficient time for a good prospect of cure had they submitted to operation. Two patients operated upon died of the operation.

One patient has a suspicious run of symptoms which make it probable that there is recurrence (after eight years). The remaining 18 cases are alive and well as far as cancer is concerned.

If the whole number of cases (24), seen are considered, we find 3 not operated upon (1 too far advanced; 2, operation declined by patients), 2 dead from the operation, 1 with recurrence, a total of 6 not cured or 75 per cent. of cures. If the cases upon whom operations have been performed are alone considered (and this is hardly fair) we find two cases died from operation, 1 had recurrence, a total of 3 not cured or upwards of 85 per cent. of cures. Even allowing for all possible mistakes, and we are all familiar with the almost total unreliability of statistics, the enormous difference in results of treat-

ment of cancer of the neck of the womb and cancer of the body of the womb is at once apparent. It is this great difference in the same disease, located in different parts of the same organ, to which it is desirable at this time to draw marked attention.

1722 Chestnut street.

---

### SOME REMARKS ON THE CÆSAREAN SECTION WITH A REPORT OF A CASE FOR THE RELATIVE INDICATIONS.\*

BY GEORGE M. BOYD, M.D., PHILADELPHIA, PA.

I feel that I must apologize for not having prepared a paper. I have only a report of the Cæsarean section which I recently performed. It is reported to put another case on record in defence of cœliohysterotomy and also to make a few remarks in regard to Cæsarean section, particularly regarding its indication in the doubtful cases, or where there exists only the relative indications for the operation. In the few cases the Cæsarean section is absolutely indicated; in the majority the indications are only relative. Then other methods of operation must be entertained, and, to the exclusion of one or more operations, the Cæsarean section is resorted to in the majority of cases in the interest of the infant.

I recently read a paper on "The Indications for Cæsarean Section in Placenta Prævia." Section seems indicated in certain cases where we have a complete implantation of the placenta or a partial implantation with the bleeding occurring after the viability of the child. In 75 per cent. of cases hæmorrhage occurs within a week or two weeks of term, and according to the report of one clinic in 80 per cent. of cases it occurred only two or three days before term. In some of the German clinics the maternal mortality is given as 10 or 12 per cent.: the foetal mortality as 75 per cent. The older methods of treating placenta prævia by rupture of the membranes, dilatation of the cervix and podalic version have brought this maternal mortality to 10 or 12 per cent. The foetal mortality is still high, and it seems to me that in certain cases of placenta prævia we have a Cæsarean section indicated because of this high foetal mortality.

In many cases of prolonged or delayed labor we have the Cæsarean section indicated from the standpoint of the high foetal mortality

---

\* Read before the Philadelphia Obstetrical Society April 4, 1901.

that is associated with other methods of operative interference. The conclusions reached in the paper were that Cæsarean section was indicated in complete or partial placenta prævia, where the child is viable and where it is shown there exists a rigid cervix. If the cervix is dilatable and the hæmorrhage occurs early, other methods of operative interference may be resorted to, but it would seem in those cases of hæmorrhage at or near term and where there exists a rigid cervix that we were conserving the child's interests by accomplishing delivery by abdominal section. In the majority of cases of tedious labor the operative interference must be determined only as the case advances; we cannot map out the course of procedure. This is unfortunate, because of the fact that it is impossible to prepare for the operative interference a longer time in advance.

The case which I have to report was a Cæsarean section for the relative indications. The history is: Mrs. B., aged 27; multipara; negress; applied to the Philadelphia Lying-in-Charity in January, 1901, for admission. The examination made at that time was as follows: Menstrual history began at the twelfth year, normal. The last menstrual period was May 29, 1900.

Previous history: The first child was still born; second child also still born after a long instrumental delivery. With the third child there was also a long labor, and the child died on the second day. Measurements of the pelvis were:

Circle of the pelvis, 94 cm.; circle of the abdomen, 103 cm.; intra spinous, 23 cm.; intracrystal, 25 cm.; ext. conjugati, 19 cm.; diag. conjugate, 9.5 cm.; true conjugate a little over 8 cm.

Diagnosis made of generally contracted pelvis.

The patient was told to return in a few days that we might study the case closely, but she did not appear until after having been some hours in labor. She came to the Hospital on February 9th eleven hours in labor. The membranes were still intact. The patient's condition upon admission was fair. The head of the child was at the brim. With the history of three difficult labors we naturally expected a long labor and possibly a difficult forceps delivery. With the conservatism exercised in that institution the patient was given the full test of labor. On the following morning, the patient being 15 or 16 hours in labor, the membranes ruptured. The head remained high and transverse at the brim. Pulse and temperature were good. As the case was not progressing, and in view of the previous history, it seemed wise to make a careful internal examination. Digital examination was made without ether. It is my custom, and I believe

it should be the rule, in all cases of delayed labor with the head high, to anæsthetize the patient and introduce the fingers or hand into the uterus and determine the pelvic deformity, the presentation and position of the presenting part. The head was found in a transverse position at the brim and the occiput to the left side. We then anæsthetized the case and applied forceps, making judicious traction with the Tarnier axis traction forceps. After making traction (having in mind the possibility of delivery by abdominal section), we found that the presenting part could not be made to advance. Failing with the forceps we told the patient of the danger to the child's life by prolonged traction, also the danger by podalic version. She consented to the Cæsarean section. She was prepared for abdominal section and cœliohysterotomy performed. It is wise in cases long in labor and in which in addition to the test of labor forceps delivery has been attempted, to carefully examine the foetal heart just before making the abdominal incision. This was done and the heart sound could be heard without great difficulty, although the child's life had been to some extent jeopardized by the thorough test of labor and the use of forceps.

Section was rapidly performed and a living child was delivered. The operation was of no special interest other than the fact that we met with the placenta on the anterior wall of the uterus. In four cases I have found this abnormal location of the placenta, so that I personally feel convinced that the placenta about as often occupies the anterior wall of the uterus as the posterior wall. The placenta was stripped off on one side, the child delivered by the breach and the uterus rapidly contracted. The patient made a nice recovery with the exception of a mild pneumonia, which fortunately yielded nicely to treatment.

I report this case, first, to put another case on record, and, secondly, to endorse the wisdom of carefully examining the patient manually under ether when in doubt as to the position of the presenting part, and the degree of disproportion between the pelvis and the foetal ovoid.

---



## THE PUBESCENT SCHOOLGIRL.\*

BY WM. EDGAR DARNALL, A.B., M.D., ATLANTIC CITY, N. J.

Visiting Physician to the Atlantic City Hospital and the Mercer House for Invalid Women; Fellow of the American Academy of Medicine, etc., etc.

There is no more critical time in the whole life of the female than the period of her puberty. Its importance is not recognized by the laity, and is oftentimes unappreciated by the profession. It is the time of most rapid development of both the mind and the body; a starting point for the perfection of physical womanhood or the first beginning of the physical wreck. The girl while passing through this change is peculiarly susceptible to mental, moral and physical influences, and her environments and tendencies should be studied with utmost care and discretion.

The rompting, hoydenish maiden, who likes nothing better than an escapade with her brothers, now becomes quiet, shy and reserved; sometimes morose. She may be irritable, where formerly she was sweet tempered, and subject to emotional and hysterical attacks. New emotions fill her breast and yearnings, of the meaning of which she is yet unconscious. Judgment and wisdom are oftentimes necessary in the study of her temperament. She should be shielded from every deleterious influence, while her mind and her feelings should be directed along healthy channels.

The average pubescent girl is at school, and under the modern high-pressure system is straining every energy to keep up with her duties. Her physical development gets neither time nor attention, for all of her vitality is used up in mental effort. No one who has watched the delicate, pale-faced children trudging to school, groaning under a load of books almost heavy enough to give them curvature of the spine, can doubt that this system is largely responsible for the nervous irritability and dyspepsia that have become such prominent characteristics of our people. It is forgotten that cultivation of the intellect and the cramming of the mind do not comprise the whole development, and that unless due importance is given to the training of the body, so that it may keep pace with the mind, such training may do more harm than good.

---

\* Read before the Section on Diseases of Children of the American Medical Association, St. Paul, Minn., June 4-7, 1901.

The curse of the age is the demand for rapid education. The children are crowded through long years of work, often sacrificing health for promotion. During the period from nine to fifteen years of age the body is developing so fast that brain weight is actually lost by the lessening of the usual blood-supply, which goes to nourish rapidly growing organs. The child brain is easily fatigued. What is acquired by a tired brain is soon lost. Memory thus becomes demoralized and the very end for which one is striving is defeated. Vital force is required of the child faster than it is generated. The work of to-day is done on to-morrow's credit, and the system of the child becomes wholly at a loss to protect itself against disease and accident.

While this is true of the boy, whose very boyishness makes him tougher, it is even more so of the girl. The physiologic processes of her puberty make greater demands than they do of the boy. In addition to performing the same work in school as her brother her parents are not only anxious that she shall take high rank in the regular studies but also that she shall acquire the accomplishments, such as music and painting, at an early age. Too much time is given to tiresome practice or poring over books, when she could be out in the open air enjoying herself as only children can. Then, just as the menstrual period is beginning, just as puberty is struggling to assert itself, comes the examinations for promotion to the high school. Is it any wonder, then, that under this high pressure and stimulation the girl, robbed of rest, sleep and exercise, fails to develop into perfect womanhood? Then follow four years of hard study; four years of endless antagonism between brain growth and body growth: four years, perhaps the most important in her whole life, very needful for the perfect development of the reproductive organs and the establishment of their functions, and on which may hang the whole future health and happiness of the woman. The nervous force, so necessary at puberty for the establishment of the menstrual function, is wasted on what may be compared as trifles to perfect health, for of what use are they without health? The poor sufferer only adds another to the great army of neurasthenics and sexual incompetents, which furnishes neurologists and gynæcologists with so much of their material. Homes are made unhappy, health gives way, and useful lives are wrecked in the demand for rapid education and brilliant results.

Let me illustrate for a moment what I mean: To-day girls are absolutely started to school before they can dress themselves. They sit in miserably ventilated rooms from six to eight hours, with perhaps a few minutes' recess, when they hurriedly eat a cold lunch. At

twelve years of age they are studying English, mathematics, and a host of other things. With a burden of books the girl reaches home in the afternoon tired and worn out. She must go at once to her music and practice for two hours, or until she becomes so nervous that the notes fail to strike harmony, and an observer would think she had chorea. Supper is announced, and afterward she must begin her preparation for the next day's work, often being compelled to study as late as ten or eleven o'clock; then, of course, her tired brain and body are too exhausted for sleep. This is no overdrawn picture, and every physician knows that it is not right to subject a girl verging on menstruation, or one upon whom Nature is making a desperate effort to maintain this function, to such an exhausting strain as this.

Visit the female colleges and you will be impressed with the large numbers of pale-faced girls whose roseate blushes of youth have been chased away by nervous exhaustion born of the shadows of midnight toil; bright eyes have been dulled by brain-fag, and sweet temper transformed into irritability, crossness and hysteria, while the womanhood of the land is deteriorating physically and filling our hospitals with invalids. After this weary, worn out, rest-needing girl is released from school she launches into the dissipations of social life. She may be highly cultured and accomplished, and shine in society, but her future husband will discover too late that he has married a large outfit of headaches, backaches and spineaches, instead of a woman fitted to take up the duties of life.

Accompanying the prolonged strain and tension of school life there is usually a combination of other causes involved in the school breakdown. Home life is often badly regulated. In many instances much of the blame may be laid to carelessness and indulgences at home. Scant attention is given to the functions of the bowels and the bladder. Gross carelessness is the rule. There is an utter disregard for the menstrual week, when by their own feelings and sensations women ought to know they are unfit for exhausting brain work or fatiguing body work. Again, the stomachs of girls are often spoiled by an unwholesome diet of sweetmeats, pickles and highly seasoned food, and nibbling between meals. Too long confinement in impure air, inadequate supplies of light, little exercise and poor sanitation complete the evils that other factors have contributed to.

Schmidt-Mounard found in the schools of Leipzig that headaches, sleeplessness and nervous ailments were frequent, especially among girls. Those schools, however, in which attention was given to gym-

nastics, and other forms of exercise, had a much smaller proportion of children suffering from these things than those in which it was not.

The close-fitting female dress is not an unimportant factor in the ill health of womankind. There is nothing woman is more unhygienic about than her dress, or harder to convince that it is wrong. As a rule, the body is not evenly clothed, the clothing being too heavy about the trunk and too scant about the chest and the limbs. The body heat is thus unevenly distributed, and the equilibrium of the circulation demoralized, with resulting colds and congestions. Thin shoes are often worn during cold and damp weather, and in many instances even slippers, for vanity's sake. Heavy skirts are suspended from the waist instead of the shoulders, dragging down the pelvic viscera, and, worst of all, the growing girl is early put into an ill-fitting corset. She is fitted to the corset, not the corset to her. There are mothers, even, who encourage a certain degree of lacing at this period in order, as they think, to produce a beautiful figure in their daughters. The unsophisticated child forces her delicate body to fill the upper and lower curves of the corset by increasing the tension about the waist. The result is that the abdominal viscera must either be forced upward or downward.

Dickinson has made an extensive study of the influence of the corset upon the chest and abdomen. He finds that the estimated total pressure of the corset varies between thirty and eighty pounds. The capacity for expansion of the chest was found to be restricted one-fifth when the corset was on. The abdominal wall is thinned and weakened by the pressure of stays. The liver suffers more direct pressure than any other organ, and is more frequently displaced, while the pelvic floor is bulged down one-third of an inch by lacing. To convince yourself of this you have only to make a vaginal examination with a corset on the patient, and again with it off, and compare the results. "Certainly no other reason," says Kellogg, "can be given for the abnormal waist of the civilized woman than the fact that this portion of the body has been subjected to abnormal pressure in such a manner as to prevent natural development, and to compel the acquirement of a deformity."

First, downward displacement of the abdominal and pelvic organs takes place; secondly, the muscles of the trunk do not develop. Now, cramped under this pressure, forced out of their natural position, the circulation is interfered with, and a full bladder and rectum carelessly neglected serve to make the matter worse. How can the sexual organs, therefore, on which so much depends, properly develop? No girl during the pubescent period should ever be allowed to wear a corset, and



thereby run the risk of lifelong misery from its deleterious results. One of the flexible waists, if properly worn, will answer every purpose both of dress and for health. It is little short of a crime to encase a growing school-girl in a modern corset.

The errors of development caused by some of the influences here outlined are met on every hand in the adult female clientele of every physician. This class of patients includes in general terms many of those whom we call neurotics, and who are prone to suffer from the functional diseases of the sexual organs, more especially painful and irregular menstruation.

The bane of the existence of the school girl, weary and worn from the continual grind of her overwrought life, is painful menstruation. Chapman thinks that perhaps 75 per cent. who have reached the age of puberty would give a history of scant and painful menstruation. Engelmann, in a tabulation of 5,000 cases among school girls, found 66 per centum were afflicted with more or less menstrual suffering. The fact of the pain being increased with hours of intensity of study, with worry and emotion, and being diminished or ceasing entirely without treatment of any kind during vacation time, is a fitting commentary on the underlying causes. These are nervous menstrual pains, oftentimes due to a spasmodic action of the uterine muscular tissue. They are augmented by physical exertion and mental strain. The mental or nervous element is a more prominent factor than we usually take it to be, and shows the importance of general management, and the elimination of all injurious conditions of worry or debility, mental or physical. Local interference should be the last resort, and only when other efforts have failed.

A large proportion of adults who make up the neurotic class of women have arrested development in the sexual organs in varying degrees. The most common defect is a failure in the development of the uterine cervix, which retains its infantile characteristics. Under these circumstances the uterus is usually abnormally anteфлекed and the canal of the uterus less patulous than normal (Noble). This imperfect development may involve the entire uterus, as well as the tubes and ovaries, which may be more or less rudimentary. Under the stress and responsibilities of life it is this class of patients who are most apt to break down, and suffer from hysteria and neurasthenia. Much of such breakdown has its beginning back of the school days, and in the early abuse of the corset.

As a preventive measure much can be done by a watchful study of the girl for evidences of overwork, by restricting the studies during the

pubescent period, or even taking them from school altogether for a while. Ambition to excel must be curbed when it is pressing too hard with school duties. Better sacrifice the first place in the class, or fail on an examination, than get through at the expense of a weak and poorly developed body, or be the victim of a nervous breakdown and grow into a woman unfitted for the duties of womanhood and life.

Especial attention should be paid to a proper regulation of habits at home. All stimulants and excitements, such as late hours, children's parties, and the many artificialities of our so-called advanced civilization, which tend to bring about a premature maturity, should be strictly avoided. Childhood is the time of active development and growth, and as sleep is Nature's great upbuilder and restorer, children should have an abundance of it, especially while their vital capacities are being drained by exacting school duties. Especial care must be given to the general health, daily evacuation of the bowels, and frequent emptying of the bladder. Proper diet should be looked after, hurried eating and eating between meals absolutely forbidden, snacks and sweetmeats restricted, while plenty of outdoor exercise and healthy recreation should be engaged in.

Even more care is to be employed as the period of puberty advances; that period when the woman's womanhood is struggling with all its energy for recognition, and when the rapid growth and development of her organs are making exacting demands on her strength, vitality and nervous system that must be met. If her supply of vital force is expended in mental pursuit her physique must suffer. Undue excitement, mental worry or anything that may divert the vital forces from the great work they are performing in the development of a perfect woman should be jealously guarded from the pubescent girl, for in all her entire life this short period is the most important to her, mentally, morally and physically, and her whole future happiness may hang upon it.

Not till teachers and parents remember that health is more important than knowledge; not till schools realize the futility of the forcing process of education, and guard the health of their girls by diminishing, rather than increasing, the work of the pubescent period; not till they appreciate more fully that a sound mind depends upon a sound body, can we hope to diminish the pitiable army of suffering neurotics and sexual incompetents, who so largely make up the womanhood of the land, and who are to be the mothers of the men of our country.

## BIBLIOGRAPHY.

- Chapman, G. C., *Alabama Medical and Surgical Age*, March, 1896.  
 Engelmann, G. J., *Journal of the American Medical Assn.*, Feb. 9, 1901.  
 Gossett, W. B., *Louisville Journal of Medicine*.  
 Dickinson, R. L., *New York Medical Journal*, p. 507, Nov. 5, 1887.  
 Kellogg, J. H., "Transactions Mich. State Soc.," p. 41, 1891.  
 Kirk, "Handbook of Physiology," p. 178.  
 Miller, *Journal of the American Medical Assn.*, Jan. 9, 1897.  
 Montgomery, E. E., "Text-book of Gynæcology," p. 159.  
 Martin, "Human Body," Ap. p. 15.  
 Noble, C. P., *Pennsylvania Medical Journal*, November, 1900.  
 Stuver, E., *Medical News*, Aug. 19, 1899.  
 Schmidt-Mounard, *Treatment*, November, 1900.  
 Thomas and Mundé, "Diseases of Women," p. 89.  
 Zinke, E. G., *Journal of the American Medical Assn.*, Feb. 9, 1901.

---

## THE CHOICE OF OPERATION IN RETRODISPLACEMENTS OF THE UTERUS.

BY FREDERIC COGGESHALL, M.D., BOSTON, MASS.

In discussing the treatment of retroversion, retroflexion and retrocession of the uterus each writer has usually advocated some one method of procedure, with slight modification of details to meet the special indications of each case. The result is that we too often find the old Alexander operation, the various methods of shortening the round ligaments within the abdominal cavity, or fastening the uterus to the abdominal wall, spoken of as if each was of practically universal application for the cure of these displacements. I have for the past nine years been much interested in testing all of the commonly received and some of the less known operations, and have been more and more convinced that there is no one method, even with widely modified details, which meets the indications of all cases. The great divergence of opinion with regard to Alexander's operation, for example, is, it seems to me, founded upon the entirely different character of the cases of backward displacement to which men of opposite opinions have applied it. In the case of this particular operation, I think one must

add that the hostile criticism is often due to a lack of knowledge of its technique.

My own experience, and my observation of the work of several excellent gynæcologists whom I have had the honor to assist in a large number of operations, has led me to formulate the following principles for my guidance in planning the treatment of backward displacements of the uterus.

As to cases curable without operations: Retroversions of very recent origin that are replaced with ease, showing no indication of adhesions which would tend to pull the uterus back again, can usually be permanently corrected by complete replacement followed up for from one to three months by semi-weekly packing or the wearing of a pessary. The packing or pessary must, however, be carefully adjusted to the individual case. The application of either is far from being the simple, routine matter that it is often thought. The packing with glycerine, or glycerine and ichthyol pledgets, is preferable where there is the slightest pelvic tenderness. The pessary should only be used where there is absolutely no tenderness, and where the ovaries are practically normal in size and position. If the uterus does not stay in good position after two, or at most three, months' treatment, it is not only a waste of time to continue the employment of non-operative measures, but by overstretching the vagina, and in the case of a pessary, setting up irritation both in the vagina and in the adjacent region of the pelvis, they may increase the difficulty of obtaining good results by operation. Retroflexions are seldom, in my opinion, adapted for non-operative treatment. The fact of the flexion points either to an elongated and flabby uterus or to a heavy fundus which will defy all efforts to hold it in good position by packing or pessary, or to the presence of adhesions. For several years I made a faithful trial of massage in these cases, employing only the most highly trained and skilful masseuses. But my results were almost always disappointing, except where the trouble was more mental than local. It is, of course, true that many retrodisplacements of the uterus give rise to no symptoms in otherwise healthy women, especially with sound nerves. But these cases do not seek our advice, and need not be considered. My feeling, therefore, as to the advisability of operation, is that almost all cases which suffer from a retrodisplacement enough to consult the physician will save time and trouble, and ultimately money, by submitting to operation, except in the one class of cases, which, however, is a very numerous one, of perfectly uncomplicated retroversions of recent origin.



In the choice of operation for a case of retrodisplacement I am guided principally by the following considerations:

1. The age of the patient, as determining the probability of future child-bearing, and the liability of the round ligaments to have undergone atrophy.
2. The condition of the adnexa, including the broad ligaments.
3. The question of adhesions, in which should be included shortening of the utero-sacral ligaments.
4. The complication of the retrodisplacement by prolapse, or any marked enlargement of the uterus which is not likely to disappear rapidly after curettage and correction of position.
5. The presence of lacerations.
6. Previous unsuccessful operations for retrodisplacement.

A proper regard for these considerations in each case should, I believe, result in the selection of widely different operations. The methods of operation which meet the various combinations of difficulties arising from these conditions are:

1. The simple Alexander operation.
2. The modification of the Alexander, devised by Goldspohn, of Chicago.
3. The Alexander operation, combined with posterior colpotomy.
4. The fastening of the round ligaments to the abdominal muscles after the method of D. Todd Gilliam.
5. Abdominal fixation or suspension.
6. Vaginal hysterectomy.
7. Plastic operation upon cervix and vagina.

The effect of age upon the choice of operation is obviously most important. The fact that the patient has passed the menopause usually means that the round ligaments have undergone considerable involution, and are apt to be too weak to afford sufficient support even to a small uterus. At the same time, in such a patient, complications arising from pregnancy may be excluded. Any age beyond the menopause, therefore, is a contraindication of the first four methods of operation, all of which depend upon the integrity of the round ligaments; at the same time it removes one of the most serious, and, in my opinion well-founded, objections to ventral suspension or fixation, namely, the interference of such operations with future gestation. It also removes the gravest objections to vaginal hysterectomy. In many old women, however, where the retrodisplacement is accompanied by prolapse, it is due entirely to lacerations in childbirth, aggravated by senile atrophy and relaxation of the sub-mucous tissues of the vagina, without

adhesions. In such cases properly performed plastic operations to restore the normal tension of the perineal fascia are frequently all that is necessary to restore the normal poise to a senile uterus.

Diseases of the adnexa or of the broad ligaments must have an important bearing upon the selection of the operation. In the first place, if we cannot be perfectly positive that the tubes and ovaries are quite normal, it constitutes a serious objection to the simple Alexander that not entering the abdominal cavity we are unable to look for and correct disease of these organs, which is frequently the cause, or in long standing displacements the effect, of the malposition of the uterus. A frequent cause of failure to relieve pelvic distress and dysmenorrhœa by Alexander's operation is that the physician, finding a retroversion, assumes that this is the sole cause of the trouble, and operates for it without investigating by actual sight and touch the condition of the adnexa. We cannot bear in mind too constantly in dealing with disease of the female pelvic organs that it is highly improbable that any derangement of one of them has existed for a long time without setting up more or less morbid changes in the adjacent parts of the system. In any case, then, when there is reason even to suspect disease of the adnexa or broad ligaments the opening of the peritoneal cavity by some method seems essential. Where it is only a suspicion, or where we know that the disease exists but is not a large tumor, the operation so admirably described by Goldspohn should be done. The ovaries and tubes can be palpated through the enlarged rings or brought out through the incisions for inspection or operation. In many cases adhesions can be broken up by the same method. Where the uterus is retroflexed, the ovaries extremely prolapsed into Douglas' pouch, or in case of shortened utero-sacral ligaments, the ordinary Alexander operation, preceded by posterior colpotomy, seems to me preferable to the Goldspohn operation, as the colpotomy offers the shortest route to the adnexa in this position. By this method, also, the tubes and ovaries can be palpated and inspected, and the uterus be freed from adhesions before traction is made on the round ligaments. Where a large tumor, as an ovarian cyst of any size or large pus tubes are present, or myomectomy is required, Gilliam's operation seems to me decidedly the preferable one. In case of the round ligaments being found unsuitable for a Gilliam, that method may be abandoned even at the last minute for ventral suspension or fixation.

The question of adhesions is closely associated with the condition of the adnexa, and the same principles apply to the choice of operation. The simple Alexander constantly fails because adhesions were

unlooked for, and, therefore, unbroken, where a nearly similar operation by Goldspohn's method, by enabling the surgeon to find and break up adhesions, would have proved successful. Adhesions can also be broken up by the vaginal route. The shortening of the utero-sacral ligaments is, I believe, due, in the majority of patients, to previous pelvic inflammation, and may in any case be regarded and treated as an adhesion. The utero-sacral ligaments can be easily and safely severed by posterior colpotomy in the case of a retrocessed uterus. In case it was necessary to open the abdomen for any other purpose in the median line these ligaments can, of course, be cut from the inside. One form of adhesions which I believe to be unusual, which I have only seen once, namely, the adhesions of nearly the whole length of the round ligaments to the ventral aspect of the body of the uterus following extreme retroflexion of long standing, is such in its results as to preclude any of the operations on the round ligaments, and would necessitate fixation or suspension where hysterectomy is not justifiable.

I have been recently much surprised to read that an excellent gynecologist, for whose judgment I have the greatest respect, advised complete ablation of the pelvic organs where operation is necessary for adhesions, and for this reason he tries to avoid operation in an extensive class of cases in which I have found it very satisfactory. If it were not for these views, recently expressed by such a man, I should have thought it unnecessary to add any explanation of my idea of what operation for adhesions implies. I understand by the treatment of adhesions, first, that they are thoroughly but gently broken up or tied off; secondly, that all the loose tags are carefully removed; thirdly, that every seat of their former attachment, if it is more than a small point, is carefully sewed over with fine catgut, bringing the edges of the normal peritonæum into good apposition; lastly, that the uterus, ovary or tube to which they were attached should be brought into such completely corrected position that it is so well removed from the surface to which it was formerly attached that the least possible opportunity is offered for their reformation. Some of my cases treated in this way are of eight years standing, and many of them being in private practice, I have been able to keep track of them. And in several hundred cases I have not known more than 2 or 3 per cent. in which subsequent symptoms that could possibly be ascribed to adhesions, were complained of. This procedure means a much longer and more fussy operation than ablation, but I believe gives much better results.

Prolapse of the uterus usually means the absence of extensive

adhesions and the presence of lacerations of the cervix and perinæum, with or without senile atrophy of the deeper layers of the vaginal wall. In such cases, provided the latter factor is not prominent, the proper plastic operation on the cervix and vagina is usually sufficient. Where, however, the prolapse is extreme and the patient is past the menopause, especially where there is marked senile atrophy, vaginal hysterectomy is the simplest and almost perfectly safe solution of the difficulty.

The absence of adhesions or shortening of the utero-sacral ligaments, with the presence of marked lacerations either of the cervix or the vagina, or both, and a not markedly relaxed abdominal wall, would suggest the great probability of complete cure of the displacement even if complicated by considerable prolapse, by thoroughly efficient plastic surgery, though in deciding to trust to such methods alone gynecologists should be more careful than they often are to investigate the position of the abdominal organs generally. Any considerable degree of enteroptosis makes it highly improbable that repair of the lacerations, however satisfactorily done, will prevent recurrence of the displacement.

The necessity for properly repairing lacerations, even of small extent of the cervix and perinæum, and if there is any cystocele restoration of normal tension of the anterior wall by anterior colporrhaphy, are too obvious to need more than passing mention, and should, of course, be attended to with greatest care as an addition to any of the operations enumerated. Even a vaginal hysterectomy should be accompanied or followed by both anterior and posterior colporrhaphy, if there is any indications for the performance of either, as well as by the attachment of the vaginal walls to the broad ligaments.

With regard to the effect of previous operation upon the choice of procedure, and unsuccessful attempt to find the ligaments by an Alexander operation precludes the possibility of a second Alexander, though it adds hardly anything to the difficulty of a Goldspohn, and nothing to that of a Gilliam. Any previous operation in which the round ligaments are used for support, where they have failed to accomplish their purpose, should preclude a second attempt to make use of them, and would indicate fixation or hysterectomy. The cases which I have repeatedly observed where suspension or fixation have failed should, in case of an old woman, indicate hysterectomy, unless it is obvious that the plastic operations which have been done on the perinæum and cervix were insufficient. Fortunately, improper performances of these latter do not preclude a successful repetition of the attempt to cor-



rect the displacement by properly restoring the cervix and the tension of the pelvic fascia.

Bearing in mind the considerations which I have just stated, it is my practise to select one or the other of the operations previously enumerated to meet the combination of all the circumstances in the case.

1. The Alexander operation, unmodified, when there is retroversion or retroflexion without adhesions, so that the uterus is replaced with perfect ease, if the woman is still of a childbearing age, if the uterus is not markedly enlarged by actual hyperplasia, as distinguished from congestion, and if the symptoms, confirmed by careful bimanual examination without ether, and under ether, at the time of operation, indicate nothing wrong with the adnexa, and no evidence of fibroids. When properly performed the operation is a very short one, requiring not more than half an hour for both sides, even in the hands of a slow operator. The common objection, based on the difficulty of finding the ligaments, is simply a consequence of the common ignorance of the technique among otherwise skilful gynecologists. This operation has the advantage of not opening the abdominal cavity where there is no indication for doing so. It is preferable, for this reason, to methods of shortening the round ligaments by doubling their proximal portions on themselves, but it has another much more important advantage over such methods, in that it shortens, not by doubling the thicker and stronger portions of the ligament on itself, and leaving the thin distal end to afford support, but by eliminating this thinner and weaker portion of the ligament. Moreover, in the only two cases in which I had the opportunity to observe it, my experience confirms the more extensive observations of Goldspohn that the ligament, when folded on itself at the proximal end, will be found a few years later to have pulled out, and to be in just the condition that it was before the operation.

2. The Goldspohn operation is the operation of choice under the following conditions: First, whenever, in performing an Alexander the ligament is broken, or is difficult to find, though I think it is necessary to admit that it is always the result of the operator's haste and carelessness, or his ignorance of the proper technique of Alexander's operation, when such a contingency arises. Secondly, the Goldspohn is indicated in the large number of retroversions where we cannot be positive about the non-implication of the adnexa, or where we know that diseased tubes or ovaries need to be dealt with, or adhesions to be broken up, always provided that the adnexa are not too large to

be brought out through the enlarged ring. This range of application makes the Goldspohn operation one of the most frequently useful methods for treating retroversion.

3. A posterior colpotomy followed by an Alexander seems more convenient than the last-mentioned operation in the case of a marked degree of retroflexion, with adhesions, or of adnexa which are diseased, but not too large to be brought out through the ordinary posterior vaginal incision, and which are at the same time markedly prolapsed. In other words, the posterior vaginal route seems to me preferable when the adhesions or adnexa are situated well down in Douglas's pouch. Lastly, this is decidedly the best operation in case of retrocession, as the most important measure for the cure of this form of retrodisplacement is the free division of the utero-sacral ligaments. Criticism has been directed against this measure by several gynecologists of reputation, but in the light of my own experience I am unable to see that it ever does any harm, and feel very positive that it is of great service in relieving many cases of dysmenorrhœa and persistent back-ache. I have performed the operation many times, and have had opportunities to follow the cases of other operators, and have never yet seen any ill results which could be traced to this measure. Before assuming that the utero-sacral ligaments are of any particular use to a woman one should remember that the whole system of uterine ligaments is a survival of an arrangement developed in, and adapted to, quadrupeds.

4. Where it is necessary for any other purpose to open the abdomen by a median incision, as for the removal of a large tumor, Gilliam's operation is the most convenient method of fastening the uterus in place, except in cases where the round ligaments have undergone much atrophy. It requires no more time to perform than is necessary to double the ligaments on themselves, and has the immense advantage over that method of throwing the thin distal portion of the ligament out of use and depending upon the stronger proximal portion for support. It also changes the direction of the round ligaments, so that they pull more directly in the line required than if they retained their original insertion. This operation is a new one, and I performed it for the first time only eight months ago, but the immediate results in the six cases in which I have since employed it have been excellent, and the theory of it is thoroughly sound and reasonable. The reasons for preferring to hold the uterus forward by the round ligaments instead of by any artificially produced adhesions are, to my mind, obvious. The ligaments are ideally situated for our purpose. They are

elastic, capable of evolution and involution to accommodate themselves to pregnancy, and they are not liable to indefinite stretching under the backward drag of the uterus after operation any more than before. The reason why the uterus can retrovert with normal round ligaments is that they are not naturally adapted to hold it forward, as it is normally held in position by a combination of intra-abdominal pressures, and the tension of the perinæal fascia. But the ligament, as shortened by operation, does offer resistance to the return of the uterus to its former backward displacement.

5. Where the round ligaments are not available, which can hardly ever occur except in women past the menopause, ventral fixation may be employed. I hardly feel that it is ever the operation of choice, but I am sometimes driven to it by necessity. The indications enumerated, namely, age past childbearing, round ligaments unfit for use and the necessity of the median incision for some other purpose, leave, when they are combined, a certain limited number of cases in which I should perform ventral fixation. The principal objections to it have been pointed out so often that I need only enumerate them. I believe that it does frequently cause miscarriage, that it is at least liable to strangulation of the gut, and that it frequently fails of its purpose because of the gradual stretching of the adhesions upon which one depends for support. My personal experience in the performance of the operation has, I admit, been limited; I have only performed it eight times, one of which was a failure. But I have notes of twenty-three cases in which it was performed by gynæcologists of reputation, both in my own city and in New York, Chicago, Baltimore and Canada. These cases were those which have happened to come under my care subsequently for various reasons. Four of them suffered from miscarriages, which had no other visible cause than the inability of the uterus to shift its position during pregnancy, and one of these has gone to full term since I severed the adhesions through a median incision, and then performed an Alexander. Another one has become pregnant since I performed a Gilliam a few months ago, and has reached five months without trouble. In three of them, middle-aged women, I performed vaginal hysterectomy in from one to five years from the previous operation for prolapse of the uterus, the adhesion to the abdominal wall being found as a long string, or, in one case, a group of three strings, which had stretched out so as to allow the uterus to return to a position as bad or worse than that which it had been originally sought to correct. In three cases, young women, I found the same condition, two of which have remained cured for some years after removing the adhesions

caused by the suspension and doing an Alexander, and on the third I performed Gilliam's operation within the last few months. In all three the round ligaments were perfectly fitted for affording the necessary support. I have seen one case of fatal strangulation of the bowel, and another death under obscure conditions, in which operation and autopsy were refused, where strangulated bowel were strongly suspected. Throwing out this last case, which is doubtful, I have seen eleven bad results out of twenty-three cases operated upon by the most skilful advocates of this procedure. I admit that these cases are too few to base a generalization upon, and have purposely avoided the deceptive practise of quoting them in percentages. I am also quite ready to acknowledge that my experience has been exceptionally unfortunate. But it is natural and reasonable that every man should be guided in practice by the result of his own experience, even when it is not wide enough to justify generalizations, and he has a right to state such experience provided he points out its limits.

6. Vaginal hysterectomy is, in my opinion, perfectly legitimate as the remedy for retroversion, especially with prolapse in women past the menopause, where there is marked atrophy of the vaginal wall, especially if there is any degree of ptosis of the abdominal organs generally. The general flabbiness of the abdomen, vagina and perinæum, which we so often see in fat middle-aged women, with extensive lacerations, renders the result from mere repair of the lacerations doubtful. I am unable to see the force of the arguments by which some men seek to prove that the complete removal of the uterus is injurious and undesirable in itself, and only to be resorted to in a case of necessity. In any woman past childbearing I should unhesitatingly advise it as the shortest, most certain way of curing really trouble some displacement. The vaginal route is to be preferred where the vagina is capacious and the uterus not large.

7. The repair of lacerations of cervix and perinæum, with the addition of anterior colporrhaphy where indicated, is a simple and effectual means of treating moderate degrees of retroversion, especially accompanied with some prolapse in women who are not certainly past childbearing, or even in older women, where neither atrophy of the deeper layers of the vagina nor enteroptosis are present. Such cases are among the commonest, and have, unfortunately, come to be treated by unnecessarily serious operations, ventral fixation or hysterectomy. While I should feel no hesitation about vaginal or abdominal cœliotomy, where I was not reasonably sure of permanent cure by anything less, I do not believe that even the present state of abdominal surgery has



reduced the risk of opening the peritonæum to such a point that we are justified in doing it where there is every probability of a cure by a less serious operation. The tendency to resort to more radical measures in such cases as I am speaking of is largely the result of the general surgeon's meddling with gynæcological cases. Such an operator is usually utterly ignorant of the proper technique of gynæcological plastic surgery, and he is too apt for this reason to subject the patient to a risk which, if not great in the hands of a careful man, is still quite appreciable when she might have been equally well cured by a much simpler operation by a gynæcologist who, knowing its indications and its technique, would be unable to quote its unsatisfactory results from personal experience, as I have repeatedly heard the general surgeon do in regard both to these plastic operations and to Alexander's.

I have not considered at all a number of the operations which have been advocated for retrodisplacement, because so many of them, like Mackenrodt's method of fixation through the anterior vaginal wall, seem to me illogical, and in the few cases that I tried by these methods the average results were not satisfactory, though this may have been largely due to my ignorance of their technique. At all events I have for the past five years found the operations I have enumerated sufficient to meet the indications of all the cases I have had to treat.

---

## TUBAL ABORTION.\*

BY HERMAN E. HAYD, M.D., M.R.C.S., ENG., BUFFALO, N. Y.

Extra-uterine fœtation is now recognized to be a very common condition, and there are few surgeons, even in our smaller cities, who have not operated many times for this interesting complication.

The most frequent location for the ovum is in the tube proper, and from the sixth to the tenth week rupture usually takes place, either into the free peritonæal cavity or between the folds of the broad ligament. Rarely, but without doubt occasionally, the ovum grows in the ovarian structure and produces a true ovarian pregnancy, more frequently in the uterine cornua, and occasionally at the tubo-ovarian junction, making the tubo-ovarian variety. After the ovum attaches itself to the walls of the tube, and its onward course into the uterus having been prevented by some obstructive cause, either mechanically in the lumen of the tube, or through imperfect muscular and contractile power of the tube structure themselves, certain changes take place in both the ovum and the walls of the tube, analogous to those which take place in normal pregnancy in the uterus. The tube becomes softened, its meshes are infiltrated with true chorionic villi, which form about the ovum, making a rich blood supply, and by which a fixed attachment results, and through which the nutrition of the ovum is carried on. In the growth and development of this aberrant embryo, the tube becomes distended, thinned and weakened, and finally a rupture takes place, producing the classical signs of hæmorrhage into the peritonæal cavity; pain, shock and collapse, more or less profound, according to the degree of bleeding and the suddenness of the onset.

However, the ovum does not grow as rapidly, nor does it assume the same proportions as when it is normally attached to the uterine mucous membrane, and the size being so small in the early ectopic pregnancies is the reason why it is often lost at the time of operation; either it is digested by the peritonæum, if it remains long enough in the peritonæal cavity, and if the accompanying hæmorrhage is not too great, or it is lost at the time of operation, by being mixed up in the clots, which are large and very numerous when the bleeding is active. This fact, that the ovum, when so young, is not often found, and no

\* Read before the Fourth District Branch of the New York State Medical Association, Buffalo, N. Y., May 31, 1901.

rent is seen in either tube, and no placental tissue, has led to the belief in the frequent existence of pelvic hæmatocele, but I am satisfied Tait was right, when he said that most of these cases are really tubal pregnancies. Occasionally an internal hæmorrhage may take place from the rupture of varicose veins in the broad ligament, when the pampiniform plexus of veins have become greatly distended with blood, as a result of various obstructive causes to the return circulation, or again but rarely, when a bleeding tumor develops in the broad ligaments, and some of its vessels are rent by various efforts in locomotion, and, as a result, an intrapelvic hæmorrhage takes place. Nevertheless, these cases are so extremely rare that they may be left out of our consideration altogether, and for clinical purposes we may assume that nearly every case of intra-abdominal hæmorrhage is due to a ruptured tubal pregnancy. An aneurism of the large vessels may cause a rapid and fatal hæmorrhage, but the history of the case would soon enable us to exclude this rare accident. So injuries to the abdominal wall and abdominal viscera may cause dangerous internal bleeding, but here again the history would clear up the diagnosis, but if in doubt, an exploratory incision would be indicated, because there is no reason why a woman, carrying an extra-uterine pregnancy, might not also receive some severe injury which might cause the sac to rupture.

The specimen I am about to show you is very interesting, and, at the same time, is a beautiful one, because it is so perfect and yet so delicate. There can be no question but what the case was one of tubal abortion, and the pathology a true tubal pregnancy, in which the ovum developed well out in the tube: in fact, the fimbriated portion. Usually the fimbriae are turned in on themselves and close the tube up, making a closed sac, but in my specimen the abdominal end of the tube must have been patent, or, at all events, its edges very slightly agglutinated, and it was roofed in by a piece of adherent omentum. The contractions of the tube were perhaps stimulated by the menstrual crisis, and the ovum was thrown off into the peritonæal cavity. Of all the cases of extra-uterine pregnancy I have operated upon, I have never seen such an amount of free blood and clots in the belly cavity, and yet there was no tear or rent in the tube: the blood simply welled out of the patulous and open fimbriated end. The reason why the tube was removed healthy, as you see it is, was on account of the active bleeding, which was taking place from the open end. At the time of operation the patient was in extremis, showing that in these cases Nature's efforts to stop the bleeding are practically powerless. The tube is wide open, and there is so little tendency for the vessels to

contract, on account of the peculiar anatomy of the structures, a rigid open tube with an abnormally rich blood supply and a wide open space—the peritonæal cavity to quickly empty its blood into.

Tubal abortion is a very interesting phenomenon, and it evidently only occurs during the early weeks of pregnancy, when the attachment of the ovum is slight, and when the tube is distensile and elastic enough to permit its exit *en masse*. If we compare this specimen, which is not more than a month or five weeks old, with the other I pass around, about the same age, and which was passed *per vias naturalis*, the ovum and its enveloping membranes complete, we are at once struck with the insignificant size of the extra-uterine product, and the very much shorter and poorly developed chorionic villi—the whole ovum and membranes are not more than the size of a bean, and with a covering like fleecy down, while the uterine product is as large as a walnut and has a rich, shaggy, villous covering.

I was called to see the patient on January 29, 1901, and got the following history:

Mrs. M., æt 22; always well and healthy woman; married four months. On September 12, 1900, was unwell five days, natural in amount, and no pain. October 20, 1900, was unwell five days; natural in amount, and no pain. November 20th, unwell five days; no pain. December 20th, unwell five days; no pain, and natural in amount. January 20, 1901, no period, but a feeling as though it would show itself at any time. Had intercourse two or three days after December period had ceased. On the evening of January 29, 1901, I saw the patient, and found her "in extremis," pale, blanched and sweating; sighing respirations, and very pinched, anxious face. Pulse, 150; temperature,  $97\frac{3}{5}^{\circ}$  F. She complained of pain over the precordia and the left shoulder, and upon pressure pain was elicited in the lower abdominal region, although she did not call my attention to this area. Her greatest pain seemed to be in the left shoulder, but there was no pain or tenderness upon moving the joint. She arose in the morning quite well, and, while dressing, was seized with cramps in the belly. These pains increased, and about 10 o'clock a doctor in the neighborhood was sent for, and her case was diagnosed and treated as neuralgia of the heart. The pain by this time was very severe over the heart, and there was sighing, difficult and painful respiration. The doctor saw her a number of times, and in the evening I was sent for, the message being: "Come at once, as the woman is dying." With this history gotten from her husband, I quickly made a vaginal examination, and found a soft, painful fluctuating mass in the left pelvic region.



The patient was at once removed to the hospital by the ambulance, and carried into the operating room. No time was lost in the hope of stimulating her. The parts were prepared for operation, and the abdomen was quickly opened, and a broad ligament forceps applied to the bleeding side. The clots and débris were washed out, and the appendages carefully inspected. The bleeding was so free from the open fimbriated end of the left tube when the forceps was unclashed, that the tube and ovary of that side were removed. The incision was quickly closed, and the patient put to bed. At once the pulse came up; in fact, got appreciably stronger and fuller just as soon as the belly was emptied of the blood and clots, which it contained in large amounts. They were simply scooped up in handfuls. The patient made a beautiful recovery, and with an uneventful convalescence.

Some criticism was made by members of the staff, about operating upon a woman so extremely shocked until reaction occurred, but I am satisfied it is much more dangerous to delay operation—first of all, because reaction may not come, and, secondly, we have no guarantee that the bleeding will not go on actively until the life of our patient has ebbed away. Moreover, the shock in many of these cases is not due to mere loss of blood, but to the presence of clots and so much free blood in the peritonæal cavity, and this is proven by the fact that the pulse invariably goes up when this foreign stuff is emptied out. Again, the copious irrigation of the peritonæal cavity with the warm water, stimulates the patient, and the loss of the body fluid can be quickly restored by leaving the peritonæal cavity full of normal salt solution. Absorption will take place in a short time; in fact, in a few hours the peritonæal cavity will be empty.

By operating upon such a case as quickly as possible and by placing the patient in bed with hot bottles and administering such heart and respiratory stimulants as digitaline, strychnine and nitro-glycerine her chances are infinitely greater than waiting for a reaction period before the operation is undertaken.

493 Delaware Avenue.

---

WHAT IS THE SIGNIFICANCE OF CERVICAL LACERATIONS?—SOME POINTS CONNECTED WITH THEIR TREATMENT.\*

BY CHAUNCEY D. PALMER, M.D., CINCINNATI, O.

A laceration of the cervix uteri, occurring as it does almost invariably during the processes of parturition, has a greater significance than would appear at first sight. It is an accident, so often associated with other conditions, giving rise to, or followed by, serious morbid changes in and about the pelvic structures, that its import calls for more than ordinary attention and skill.

A large proportion of parturient women meet with this accident, to some degree, in their first act of parturition; but, fortunately, the tear in many cases is slight and the recuperative powers of nature so active that no untoward results are noticeable. As a rule, the accident is not known at the time to have occurred, unless it is very deep—to and within the vaginal vault, when, in consequence, an unusual post-partum hæmorrhage follows. Even then it may not be detected, for the infra-vaginal cervix and the vaginal vault are not inspected, to disclose the arterial issue of blood from the ruptured circular artery of the cervix. A parturient woman may die from loss of blood, post-partum, coming from this vessel, or from a lacerated bulb of the vestibule, notwithstanding the gravid uterus is well contracted.

Should now, from any cause, this tear be neglected, a quite vascular and very susceptible portion of the uterus is made bare, for the absorption, through open vessels and exposed lymphatics, of any septic germs from within the uterus above or the vaginal tube below. Almost every parturient woman, to some degree, suffers with a septic absorption and inflammation of the base of the corresponding broad ligament, as well as of the endometrium, when there is this injury to the cervix uteri. It is the underlying causative factor in most cases of pelvic cellulitis—largely an obstetric disease.

Now are these results all? Any septic inflammation of the genital tract of any lying-in woman delays involution of those parts. A torn and imperfectly uniting cervix uteri leads to sub-involution of the

\* Read before the Ohio State Medical Society at Cincinnati, Ohio, May 10, 1901.

uterus, with some co-existing endometritis and metritis. The cervix soon looks eroded, everted, takes on granular degeneration and cystic formation. Its parenchymatous structure becomes hyperplastic, indurated, elongated and enlarged.

So, in consequence, this central organ of the pelvis becomes displaced; first downward, then backward. Retroflexion is often noticed with retroversion. Fortunate indeed will the woman be if she escapes a resulting salpingitis with destructive alterations in structure, as well as in function, of the peri-uterine appendage.

Naught need be mentioned of the persistent post-partum flow, the exhausting menorrhagia and metrorrhagia and the troublesome leucorrhœa, followed by a permanent sterility, which may ensue.

How many women have been broken down in general health, or made constant sufferers from some functional nervous disorder reflected from this seemingly insignificant local lesion. This picture is not overdrawn in depicting all of the aforesaid consequences. They happen; not, of course, always, but often enough to make us anxious as to their possibility. There is no local lesion of the genital tract, which, when severe and bilateral or multiple, is directly followed by so many local morbid changes or so much general reflex disturbance as in this one under consideration.

Nature does the best she can to make repairs for lacerations of the cervix uteri, by filling up the gap with new connective tissue, organized from the granulations thrown out. Cicatricial tissue is repair tissue, and is always inferior in kind to natural tissue. It has a low grade of vitality, is sometimes unduly sensitive to touch, becomes a seat for reflecting irritations and is prone to take on certain degenerate changes in the declining years of life.

The relation between lacerations of the cervix uteri and malignant diseases of the uterus (where it is detected five times more frequently than elsewhere in women, except in the mammary gland), is so forcibly demonstrated as cause and effect that all physicians should recognize it.

Cancer in women is found most frequently in the womb and in parous women. It is detected, too, in its start in that portion of the womb most liable to injury in parturition—the cervix. Seldom elsewhere is it found in this organ; if so, it is in nulliparæ and in the corporeal cavity. Cancer in this organ, in the vast majority of instances, commences in this cicatricial plug, in the neighborhood of the os externum, where the squamous epithelium of the infra-vaginal cervix joins the cylindrical layer of the cervical canal.

There are, of course, in cancerous disease of the cervix uteri the

stage of innocency, the transitional stage and that of malignancy. Aside from the diagnostic evidences of the microscope there is the reasonable inference, deduced from results of topical medication, as to which of these conditions exist.

If physicians are to save the lives of women from cancer they must prevent the oncoming of this disease by doing more than has been done in preventing injuries of the neck of the womb in parturition. Lacerations of these parts may unavoidably occur but many such injuries can be prevented by allowing more time for these tissues to dilate in the first stage of labor. Is it not true that many lacerations of the cervix uteri are provoked by some injudicious use of the obstetric forceps in time or in force or by an improper use of podalic version? Nature may and ought to be directed; but she ought to be permitted to take her course in this stage of parturition. Bearing down efforts at this time, on the part of the woman, and undue haste on the part of the physician, have done much harm in this direction.

If now any cervical lacerations have taken place within the muscular substance, especially if it be so deep that the circular artery is severed, a primary union should be secured by appropriate stitching on the same principle of conduct according to which the accoucheur always repairs a torn perinæum at the time of its rupture.

The cervix will be bruised less and the presenting portion of the fœtal body will be more easily directed into the axis of the obstetric canal if the patient, in the second stage of parturition, is placed on that lateral surface of her body towards which the presenting part of the fœtus projects.

A primary tracheloplastic operation is easily and quickly done. Catgut is the suture material. Primary union is almost certain. But a secondary tracheloplastic operation is one of the most difficult plastic procedures. Failures, to some degree, are by no means uncommon. The aim, of course, should be to restore the cervix to a normal size and shape with a normal os externum. This external opening of the womb, if made too small, may lead to painful menstruation; almost surely will it be a cause of an acquired sterility. A restoration to a natural symmetry of the parts is the chief indication of success.

A sharp curettement of the whole uterine cavity is an imperative preliminary surgical step to the operation. Done at the same time, with proper aseptic precautions, it secures relief to the secondary endometritis. No packing of the uterine cavity ought to be done now.

Pronounced presence of peri-uterine exudate, evidences of old sal-



pingitis and pelvic peritonitis and fixation of the uterus, even though not complete, are manifest contra-indications to this operation.

These conditions must be relived by rest, by saline purgation, by hot vaginal douches and by topical applications of ichthyol and boroglyceride, followed, it may be, by a vaginal section (post-uterine), possibly by an abdominal section. It is a dangerous procedure to draw the uterus down, to curette its cavity and then denude and stitch its cervical walls, unless the peri-uterine spaces are comparatively free from any secondary inflammatory action. Too often it is that otherwise clearly indicated intrapelvic operations are brought into disrepute because of their individual misapplication.

Almost every gynecological operator in these cases has observed, at times, the great thickening and induration of the cervical lips with extensive cystic degeneration of the Nabothian follicles. Due restoration of the infravaginal neck and proper symmetry of these structures can, in such cases, be obtained only by a thorough exsection of both cervical lips. All risks of a stenosed cervix are overcome by the timely use of a cervical glass plug.

Tracheloplastic operations properly performed in suitable cases, with due regard to asepsis, are among the most satisfactory operations in gynecology. The local uterine mischief is very much bettered, and simply its primary lesion but also in its secondary changes. Few gynecological operations are followed by more pronounced benefits in the general health at large than is the correction of this evil.

The points I desire to present in this paper are:

1. How to avoid the undue frequency of this accident.
  2. Importance of its early recognition, and at the time of occurrence.
  3. Our opportunity to correct, at this time, the laceration.
  4. Ultimate dangers, especially as to resulting cancer of uterus.
  - 5 Frequency of imperfect results attending tracheloplastic operations.
    - (a.) Want of restoration of normal symmetry of cervix uteri.
    - (b.) Artificial stenoses.
    - (c.) Want of excision of unhealthy cicatricial tissue in bottom of rent, and, of course, some continuance of local and reflex disturbances.
-

MYOMECTOMY OF NINE MYOMATA DURING PREGNANCY AND DELIVERY AT TERM.\*

By JOHN DUNCAN EMMET, M.D.,

Visiting Gynæcologist, St. Vincent's Hospital, New York.

Pregnancy in the myomatous uterus is always an interesting subject because it is of sufficiently frequent occurrence to come within the range of each of us and because its indications are various and involve the life or death of the foetus and sometimes of the mother as well.

Gutierrez, quoted by Delagènière, maintains that of 295 myomatous women fifty-one become pregnant. If these statistics are accurate it would represent the proportion of about seventeen pregnancies in every hundred cases of myomata. Durkee, quoted by Howard Kelly, makes this proportion only 2.03 per cent. Fortunately, however, no such proportion even as this latter one presents practical difficulties to the gynæcologist or obstetrician for it is an established fact that many myomatous uteri carry their pregnancies to term and through delivery without difficulty. The myomata in these cases are either pedunculated at the time of conception or become so during the pregnancy, as a rule, but a number of cases are on record of subperitonæal, sessile tumors in or near the fundus which have presented no serious difficulty at term.

All authorities, prominently among these Howard Kelly of Baltimore, Delagènière and Dolèris of Paris, give the following general rules regarding the indications of the various forms of this condition:

Small myomata and those situated at or about the fundus or even lower in the body of the uterus frequently do not interfere with normal pregnancy and delivery, if these tumors be pedunculated.

Sessile tumors are apt to cause abortions but if situated at or near the fundus they need not do so.

Where myomata are situated at the junction of the uterus and its cervix or in its lower third myomectomy is justifiable and indicated because these tumors will probably interfere with the descent of the uterus into the pelvis and present a serious obstacle to delivery.

These data divide myomata of the pregnant uterus into three

\* Read before the American Gynæcological Society, June 1, 1901, Chicago, Ill.

classes, both in regard to prognosis and in regard to indications. The first division consists of pedunculated myomata which are not apt to interfere with normal pregnancy and delivery, unless they block the pelvis from their size or situation, and do not call for surgical interference *per se*. The second class, embracing subperitonæal and interstitial tumors of the body, frequently prevents the completion of pregnancy but, on account of the liability of abortion to follow their removal, surgical interference is not indicated as an *elective* measure. The third class embraces sessile or partially pedunculated or completely pedunculated tumors so situated that they will interfere with the descent of the uterus and with delivery and thus necessitate either Cæsarean section or the death of the fœtus and possibly that of the mother from attempted delivery through the natural passages. During pregnancy subperitonæal and interstitial tumors are apt to increase very rapidly, owing to the greater supply of uterine blood, while the pedunculated do not share, to anything like the same extent, in this increased nutriment.

The form of surgical interference always indicated—where surgical procedure is indicated at all—is I think without question myomectomy. The excuse in these cases for hysterectomy, which has been largely practiced, is founded on the erroneous belief that myomectomy, owing to the violence done the organ and the consequent uterine contractions, is nearly always followed by abortion.

Reliable statistics, extending over more than twenty years or from the dawn of aseptic surgery to the present day, give no foundation for this current belief and my own experience testifies to what extensive use myomectomy, when employed with adequate precautions against undue violence, may be applied without loss of the fœtus.

R. H. Turner of Paris, in a monograph published in that city in 1900, gives the following statistics of myomectomy during pregnancy:

Between the years 1874 and 1890 thirty-three of these operations were reported with 61 per centum of foetal mortality and 36 per centum of maternal mortality but between the years 1890 and 1900 the reported operations are forty-four with only 21 per centum of foetal mortality and 9 per centum of maternal mortality. Of the 79 per centum of pregnancies in the latter series, or thirty-four children, which survived the operation twenty-five went to term, two went to eight and a half months, two seven and a half months, three are reported as having "continued,"\* and the result in the two cases is uncertain.

---

\* Howard Kelly, in his "Operative Gynæcology," states that he has had three myomectomies during pregnancy which continued to term and gives the details of one case but one of the other two has evidently not been reported because I can find reference to but two either in Turner's statistics or in the subsequent literature.

From the year 1900 to April, 1901, I can find but five cases of successful myomectomy during pregnancy, including the one I am now about to report. Dolèris reports a large pedunculated myoma removed but though he reports recovery without abortion he does not state time of delivery; Lewis reports removal of a subperitonæal tumor followed by normal delivery; Muir Evans reports removal of pedunculated myoma. The case was in her eighth month and doing well when reported. The author's case was operated upon April 24, 1900, and was delivered at term. Gemmel reports removal of three myomata in early pregnancy with delivery at full term.\*

In the case which I am about to report I removed nine myomata, all sessile and one of which was deeply interstitial.

This case presented the following history:

Mrs. T., aged thirty; twice married; first marriage, three years ago; second marriage, about two years ago. American born; occupation until two years ago that of a saleswoman. Admitted to the Woman's Hospital in the State of New York April 16, 1900. She first menstruated at fifteen; has always been somewhat irregular, period usually occurring every five weeks, flow scanty, duration three days with severe pain on first day. No previous pregnancies. Last menstruation January 17, 1900. Previous history otherwise, as well as family history, negative.

*Symptoms on Admission.*—Almost continual backache, bowels constipated, breasts somewhat enlarged with darkened areola, slight nausea in the morning for the past month.

*Vaginal Examination.*—Large uterus fills the pelvis and is retroverted. Several myomata can be felt in the body of the organ. No distinct objective symptoms of pregnancy owing to presence of tumors.

*Diagnosis.*—Multiple myomata with probable pregnancy.

*Operation.*—On April 24, 1900, with the assistance of Drs. Sweeney, Barfield and Spalter, internes at the Woman's Hospital, I opened the abdomen by a large median incision. The patient was put in Trendelenberg's posture and the intestines covered and pushed up with a large flat sea-sponge. The uterus was grasped with the hand and brought upward out of the pelvis and was found to be studded with myomata varying in size from that of a hen's egg to that of a pea. The majority were situated in the neighborhood of the fundus and more were pedunculated

---

\* Ford of Utica reports five cases of uterine fibroids complicating pregnancy. In one case he reports spontaneous delivery of intra-uterine fibroid six months after delivery but in none of these cases does he report myomectomy followed by delivery at full term.



though several were subperitonæal for two-thirds of their caliber. Two of the largest and most prominent of these were situated just above the cervix, one in front and the other at the back of the uterus. The position and size of these two myomata decided me to perform myomectomy, even at the risk of abortion, for I was convinced that these tumors, largely increased in size as they would be at term, would make normal delivery impossible. It seemed to me also that it gave the woman a better chance and would not materially increase the immediate risk of interrupting the pregnancy if I removed all the myomata which the uterus contained for if I succeeded in accomplishing this it would contract evenly. I was not aware how many myomata the organ contained until I had removed the most prominent ones and then I was able to discover several more imbedded in the body of the uterus and not distinguishable at the first examination. One of these was quite large and could not be felt from the surface of the organ; I discovered it only after the removal of a prominent one lying in its immediate neighborhood. Two small myomata I removed through the same incision in the peritonæum, breaking down a thin layer of interstitial tissue which separated them. I continued to remove the tumors until I had obtained nine, closing each peritonæal incision with continuous catgut ligature. In several instances my suture was carried deep down into the interstitial tissue. Having carefully examined the uterus I was convinced by its symmetrical shape and decrease in size that I had at last found and removed every tumor which it contained. Nine tumors had then been removed through eight incisions. Bleeding had been inconsiderable during the operation and finding that the slight oozing which followed the closure of each incision had practically ceased I dusted aristol powder freely over the site of each line of sutures to prevent the formation of adhesions with the intestines, removed a few small blood clots from the *cul-de-sac* behind the uterus, allowed the intestines to fall down and fill the pelvis behind the uterus and then closed the abdominal incision with through-and-through interrupted sutures of silver wire.

The patient bore the operation well and beyond a small abscess in the connective tissue of the abdominal wall at the lower angle of the wound, which was drained and carefully dressed as soon as discovered, her convalescence was uneventful. During the first three or four days after operation the patient received two opium suppositories (U. S. P.) daily to obviate, so far as they might, any tendency to uterine muscular contraction.

The most important points, I think, in the technique of this operation were, first, that the uterus was supported and held steadily by the hand of my assistant grasping it posteriorly, great care being used to avoid jerking or handling the uterus unnecessarily; secondly, that in enucleating each myoma I avoided drawing the tumor up out of its bed but, holding it *in situ*, pushed back the peritonæal and interstitial tissue which inclosed it, either with my finger-nail or the handle of the scalpel, until I had reached the bed of the tumor and freed it. This method was slow but it reduced excitation of the uterine muscle to a minimum and allowed very slow and gradual contraction of the bed of the tumor. Bleeding was reduced to a minimum and the lines of suture greatly shortened. I am convinced I owe it to this consistent effort to avoid, by every possible means, excitation of the uterus that abortion was obviated.

The great lesson to be learned from this case is, in my opinion, the fact that hysterectomy may and should be avoided in all cases of myomata complicating pregnancy. If pregnancy can continue after so prolonged and irritating an operation as a nine-fold myomectomy, I can not believe that myomectomy may not always be practiced with as equally careful technique as was exhibited in this case. If the statistics which I have here collected and the history of my case shall save a proportion of foetal lives, by showing that we should not hesitate to give the patient and her child the chance which myomectomy offers, great good will have been accomplished.

I have searched all records most carefully for all the cases of this condition which have been reported up to date, beginning with Turner's report in 1874 and ending my researches with the month of April, 1901. As Turner's monograph is an elaborate and evidently carefully compiled work and is acknowledged as trustworthy by all who have written upon the subject in question I have accepted his statements as correct but from 1900, when his statistics end, until April of this year I have searched and verified, myself, the references to all cases reported.

#### *Labor and Subsequent History.*

After convalescence the patient returned home and remained remarkably free from all pain and nausea.

Owing to the great kindness and appreciation of the authorities of the Woman's Hospital, to whom I represented the very unusual importance and scientific interest of this case and that she was unable to provide for herself fittingly at home, I was enabled to place this patient in

the hospital for her accouchement. Although a free patient she was given a private room and special nurses and she and her baby were most carefully tended until I judged her fit to return home. I cannot say too much in appreciation of this action of the Visiting Committee of the Board of Governors and of the superintendent through whom I urged my request. All rule and precedent of the hospital were suspended and this labor case was ungrudgingly admitted, not on grounds personal to me but solely from a generous interest in the success of a case of unusual importance.

Several days passed beyond the date of her expected confinement with no symptoms of labor until, about 1 A. M. on November 2nd, the patient awoke with a violent pain of long duration followed almost immediately by a second and with this pain the head was born with great force. The entire duration of the labor, from the time the head engaged until the birth, was twenty minutes. In the course of half an hour the placenta and secundines came away spontaneously and intact and the uterus contracted firmly. There was no hæmorrhage but owing to the rapidity and force of the uterine contractions the cervix was deeply lacerated and the posterior vaginal wall was torn extensively, almost down to the sphincter ani. I had been notified at my house, a mile away, by messenger on the occurrence of the first pain and arrived at the hospital forty-five minutes later. The patient was so exhausted then that I determined to put off any attempt at repair until later in the day. When I then placed her under anæsthesia and thoroughly examined the lacerated posterior vaginal wall—I did not intend to operate on the cervix—I found that it was so contused, œdematous and friable that I judged it best for the patient not to attempt operative repair but to endeavor, by strict asepsis and approximation of the parts, to obtain the best result possible. To this end her legs were kept tied together and hot creoline douches with a Davidson syringe were given, by an experienced nurse, every three hours. Milk appeared on the third day abundantly. I kept the patient in bed for three weeks. At the end of that time normal involution had taken place in the uterus and cervix and the posterior wall had healed and lay well up in contact with the anterior. She left the hospital with her baby, a well-developed, healthy girl, on November 27, 1900, feeling entirely well. Her convalescence from her labor was uneventful and when I last examined her, before she left, the abdominal wall was firm. A month ago she came to my office to report and I found a small abdominal hernia at the lower angle of the wound where the abscess had been. She confessed that as soon as she left the hospital she

began to do heavy housework, including the family washing, and about a month thereafter she became conscious of a "weakening" at the lower angle of the wound. The uterus now is less than three inches in length, freely movable and in normal position while the cervix is cleft but is small, not everted and soft. There is no pathological laceration there. The fascial tension of the floor of the pelvis is apparently intact for the patient is entirely free from all subjective symptoms referable to this cause.

Shortly after my return to New York I shall operate upon the abdominal hernia, in my service at St. Vincent's Hospital, and expect to find no difficulty in effecting a cure.

#### BIBLIOGRAPHY.

Howard Kelly. "Operative Gynæcology."

R. H. Turner. *Thesis*, "Des Interventions Chirurgicales dans les Fibromes Gravidiques," Paris, 1900.

*Bibliographic Médicale*, Paris, January, 1900 to March, 1901.

*Medical Review of Reviews*, New York, January, 1900 to April, 1901.

Dolèris. *La Gynécologie*, 1900, v., 115.

Delagènière. *La Semaine Gynécologique*, 1900, v.; *Les Annales de Gynécologie et d'Obstétrique*, 1900, liii.

Lewis. *Am. Jour. of Surg. and Gyn.*, 1900, xiv., 19.

Muir Evans. *Brit. Med. Jour.*, Dec. 16, 1900.

Gemmel. *Lancet*, November 17th, 1900.

Ford. *Medical News*, March 31st, 1900.

91 Madison avenue.

---



## TO CONTRIBUTORS AND SUBSCRIBERS.

Articles and letters for publication, books and articles for reviews, exchanges, and communications in regard to the editorial management, should be addressed to Dr. J. DUNCAN EMMET, 91 Madison avenue, New York City.

Communications in regard to subscriptions should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York. Remittances may be made by check, money-order, draft, or registered letter.

Communications in regard to advertisements should be addressed to Dr. J. Duncan Emmet, 1 Madison avenue, New York.

Authors desiring reprints can procure the same by FILLING OUT THE BLANK FORM WHICH ACCOMPANIES THE AUTHOR'S PROOF. THE PROOF SHOULD BE RETURNED WITHIN TWO DAYS.

Each contributor will be supplied with a number of copies of the JOURNAL on application. Photo-engravings will be furnished free of cost if proper drawings or negatives are provided, and electrotypes or engravings will be furnished at cost.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

HEREAFTER, we will present, post-paid, on request, to each Contributor of an Original Article twenty (20) copies of the JOURNAL containing such article or two hundred and fifty reprints WHEN THESE ARE REQUESTED IN ADVANCE.

If additional reprints are desired they will be furnished to the author at cost price.

If extra copies of the JOURNAL are desired same will be furnished at 35 cents each.

---

## EDITORIAL.

### PUBLIC HOSPITALS AND THE PUBLIC.

We sometimes wish, when we hear so much discussion of hospital and dispensary matters on the part of those that know nothing of them and read in the daily papers so many articles ranging from the merely ridiculous to the severely critical, that the hospitals and dispensaries might be closed for a month or two and the censorious be allowed to do without free medical service. Such institutions, being of a more or less public character, are of course liable to be subjected to criticism. That the criticism, if offered at all, should always be adverse is trying; for instance, much good space in the newspapers has been devoted to possible abuses on the part of a few nurses in Bellevue but we fail to recall that really anything has appeared in lay print about the hard and conscientious work through many years of the majority of nurses. We would try to be content, however, to let the good pass unnoticed if only the adverse criticism offered by and for the public could cease to be what it mainly is now—both ignorant and unfair.

That some real abuses, and many trifling ones that are augmented in the public imagination into great ones, exist we do not deny. But

the public will not discriminate, will pass the former entirely by to make much of the latter and in all cases fail to recognize ultimate causes. First and foremost, we should recognize that the doctors' services in hospitals and dispensaries are entirely unpaid and that in most institutions the nurses also receive but a nominal compensation. It is certainly an anomalous situation, to be matched in the administration of no other branch of public affairs, that a department's most essential employees, those in fact upon whom the department depends for its very existence, should give their services. So it is, however; and, while this fact does not relieve these men themselves from responsibility, it does put a somewhat different aspect upon the criticism that is given as freely as the aforesaid services. That such a state of affairs should exist, that in this one matter the dear public should get gold dollars at fifty cents, or indeed for nothing, has grown so much a matter of course that nobody stops to think about it. Yet it would seem to be a fundamental consideration, in looking to a reform, that demands might be made more fairly were they for value received.

All this does not excuse the hospitals and hospital internes for the real faults that occur and for which they are infrequently blamed. We all of us know, when we see a "scare-head" about some frightful abuse, that the facts in that particular instance are probably more or less, perhaps completely, distorted and do not suffer ourselves to be unduly influenced thereby. But we also know, such of us as are familiar with the manners and customs of hospitals, that many similar things and many other things of totally different sorts do occur which never become aired publicly. It is in view of both the serious errors and also the trifles that might be avoided by a little care and tact but which, failing these, become popularly exaggerated and bring the hospitals into disrepute that we write now.

We must admit that certain mistakes are unavoidable but most of us, looking back at hospital times in the light of a few subsequent years, can take somewhat more the point of view of the laity and perceive that the house staff is often inconsiderate or worse in its relations with hospital patients and their friends. Of course the ambulance surgeon is the *pièce de resistance* for the fault finders and we are inclined to think that, while the blame may be injudiciously distributed in the individual cases for which he is criticised and while he is held responsible for many things that should be charged to the system under which he works, the sum total of the blame that should fall somewhere is not exaggerated. Partly this blame should fall upon the hospital authorities, partly upon the rest of the house staff. A great mistake in many hos-

pitals, as it seems to us, is that the ambulance is entrusted to the newest interne and unless he be a person of unusual practical knowledge, discrimination and tact he is sure to make the mistakes, both scientific and diplomatic, that from the earliest days have marked the career of the ambulance surgeon. He has to learn—what he has never been taught at medical school or in his intercourse at the hospital—that the sick are regarded by their friends, as patients rather than as “cases” and until he learns this he will hardly fail to offend against kindness and good taste and will acquire a large list of acquaintances who will be very glad to abuse him, justly or unjustly, at the first opportunity. The more serious mistakes of diagnosis he will probably make from inexperience: when we consider the usually unfavorable surroundings and the frequent difficulty of the diagnosis itself the wonder is that the mistakes are so few. In regard to one class—“head cases”—the well-known attitude of hospitals towards alcoholics is much to blame. It would be well, we think, that the authorities would make a ruling that all such cases be transferred to the hospital, to be watched there until they shall recover from their intoxication or develop other symptoms; at least they should be taken there until an absolutely certain diagnosis may be reached. If the hospital sending the ambulance be unable or unwilling to receive the case the ambulance surgeon (in New York at least) can always transfer it to Bellevue; if he be a Bellevue surgeon he should take it there anyway. Regarding this hospital feeling towards possible alcoholics we would suggest that the hospital authorities devote a little time to a consideration of an aphorism of one of our visiting physicians that “the hospitals are for the sick and injured.” At the present their chief desire seems to be to select their cases and to put up elaborate pavilions for rich private patients rather than to minister to the uninteresting and erring poor. It is not astonishing that the house staff reflect this attitude until they come to regard the hospitals as primarily for their own education and, while willing and eager to work, desire to restrict their energies to the same selected cases. What wonder, then, that the newest member of the staff comes to think that it is better to leave a dozen fractured skulls at the police station than to bring one unfractured and uncomplicated drunk into the hospital and that he would rather “get into the papers now and then than endure the ridicule of the rest of the internes?”

We have mentioned, aside from his actual errors, the attitude of the average ambulance surgeon towards the *non-ego* and in this respect the same remarks might be applied to many members of many house staffs. The ambulance surgeon is likely to be merely “bumptious,” the

house surgeon or physician rude or supercilious by turns. There is a certain excuse for the latter since all realize that never again in his after-life will he be so exalted a personage. Seriously, however, no greater mistake than this attitude can be made if for no higher consideration than that of policy; nothing does more to exaggerate the actual errors in the public mind and, alone, it is quite as efficient as they in bringing the hospitals into disrepute. Haste may be necessary but rarely roughness of speech or action. Because the average hospital patients come from the lower classes that fact does not argue them less appreciative of real kindness or courtesy though they may not complain of their lack of these. We admit that cranks are found now and then among these people as among the richer classes and that valuable time cannot be wasted upon them but the majority of hospital patients cause far less trouble than the better-to-do and, if treated with a little consideration, will repay it not only with gratitude but with consideration in return and will rarely presume upon one's time or politeness. One of the writer's pleasantest recollections of hospital days is that of the unfailing courtesy which certain of his visiting physicians accorded to every patient, with no loss of time and no loss but rather gain of dignity. This was real kindness but, if it were no more than a matter of future training, the average interne should consider his manner towards hospital patients and their friends or he will have much to unlearn on entering private practice where people, so far from putting up with less, expect more than their due.

We are not seriously looking towards the time when public physicians shall be paid for their services but, whether they be paid or unpaid, criticism will continue so long as the other conditions that we have pointed out continue.

We think we have shown how some slight changes in the management and certain very great changes in the attitude of the hospital authorities and house staff would result in fewer actual errors together with much less misconception of the good which is really accomplished.

A. D. C.

---



## REVIEW.

Principles of Surgery. By N. SENN, M.D., Ph.D., LL.D., Professor of Surgery in Rush Medical College in Affiliation with the University of Chicago; Professorial Lecturer on Military Surgery in the University of Chicago; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; Surgeon-General of Illinois; Late Lieutenant-Colonel of United States Volunteers and Chief of the Operating-staff with the Army in the Field during the Spanish-American War. Third Edition. Thoroughly Revised, with 230 Wood Engravings, Half-tones, and Colored Illustrations. Royal Octavo. Pages xiv-700. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia.

As was said in these columns upon reviewing the second edition, a year or so ago, this work is so well and favorably known among the more scientific portion of the profession that a detailed description now hardly seems necessary.

The endeavor of the author has been, not to make this work an operative surgery, of which there are a number of most excellent ones, both American and English, but rather "a systematic treatise on the causation, pathology, diagnosis, prognosis, and treatment of the injuries and affections which the surgeon is most frequently called upon to treat." He has also aimed to keep in constant view "the difference between the cellular processes, as observed in regeneration and inflammation, and to connect the modern science of bacteriology more intimately with the etiology and pathology of surgical affections."

In the glamour of the modern operating theatre, with its elaborate technique, etc., the medical student and ambitious young practitioner is inclined to lose sight of those fundamental principles underlying the *science*, in the search for the more superficial and apparently more practical information pertaining to the successful practice of the *art* of surgery. To one understanding the principles of surgery, there is no difficulty in applying his knowledge in practice, no matter what emergency may arise, for the reason that he is always able to select or devise the proper procedure for the case in hand, rather than by having memorized special operations, details, etc., must necessarily make the case fit into them. The text of this edition has been thoroughly revised, and

many additions made, among them two new chapters, one on "Degeneration" and the other on "Blastomycetic Dermatitis." Numerous new illustrations have also been added, most of them original.

M.

The American Year-Book of Medicine and Surgery for 1901. A yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs and text-books by the leading American and foreign authors and investigators; arranged with critical editorial comments by eminent American specialists under the general editorial charge of GEORGE M. GOULD, M.D. Published by W. B. Saunders & Co., Philadelphia and London.

Again it is our pleasure to announce the appearance of the latest "American Year-Book of Medicine and Surgery." To the thoughtful medical man an announcement of this book should be all sufficient. A most casual observer of the times cannot but recognize the necessity for the résumé of recent medical literature. Here the oft mentioned busy practitioner encounters the latest thoughts of the medical world upon any given subject at a minimum cost of time and labor; while those wishing to look up the literature for themselves will find an invaluable aid in the bibliographical foot notes.

Of all the publications of a similar nature, the "American Year-Book" is the most complete and satisfactory that has come to our notice. The experiment of publishing the work in two volumes has proven so acceptable that that form has been continued this year.

As in previous volumes, the illustrations and typographical work are highly commendable.

G.

Self-Examination for Medical Students. 3,500 Questions on Medical Subjects arranged for Self-Examination, with Questions of State Examining Boards of New York, Pennsylvania and Illinois. Third Edition. Enlarged. P. Blakiston & Co., Philadelphia.

This little book has been prepared by a medical man, a teacher and writer of experience, with special reference to the actual wants of the medical student. By its help the student can successfully quiz himself on all of the important branches, or review any one subject in which he feels himself to be particularly deficient. The questions seem to be well selected, and cover their respective fields most thoroughly. This

book differs from the others of its kind in not having the answers following the questions. Instead, after each question, is a reference to the volume, book, and page where the correct answer can be found. This system, unfortunately, necessitates the possession of seventeen different medical works, to say nothing of the labor and time in looking them up. A separate volume, with the answers correctly numbered, or one-half questions and the other half answers in the same volume, would seem to be just as valuable as a self-quizzer and much more convenient. The questions of the different State examining boards is also valuable as an indication of what sort of questions one may expect to meet at these examinations.

M.

---

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL  
SOCIETY.

Stated Meeting, April 4, 1901.

The *Vice-President*, J. M. FISHER, M.D., in the Chair.

*Some Remarks on Cæsarean Section with the Report of a Case for  
the Relative Indications.*

BY GEORGE M. BOYD, M.D.

(See page 485.)

DISCUSSION.

Dr. STEWART: I can hardly agree with Dr. Boyd in considering that all cases of placenta prævia should be reduced to Cæsarean section. From my own experience I think that where the placenta is centrally located we have evidence of it much sooner than Dr. Boyd states; that is, about the sixth month I think we have hæmorrhage. In cases of that kind the child would hardly be viable enough to live, and we must use our judgment as to the propriety of any operation to relieve the mother. I would still resort to the rapid dilatation of the cervix and deliver if the hæmorrhage could not be stopped.

In my later years I have had a number of cases of placenta prævia, but not so many of those centrally located. When the placenta is only partially covering the cervix I still maintain that after the seventh month of gestation the child can be delivered with safety and live if proper manipulation is resorted to and quickly done. I was first impressed with the idea of a rigid os and undilated cervix by one of the members of this Society stating his experience in rapid dilatation by introducing one finger and then another, thus relaxing the cervix and os, and the patient becomes nauseated and you have relaxation produced rapidly and completely. In my experience, in the majority of cases I have had, I was able to save both mother and child, and in no case have I ever lost a mother.

Dr. OLIVER HOPKINSON: I saw the baby Dr. Boyd delivered, and



from the size of the head and of the pelvis, I am perfectly confident that attempt at delivery by forceps would have resulted in craniotomy.

High examination, as Dr. Boyd remarks, should always be made. We may find that the fontanelles and sutures are small and that the head is lying freely movable in transverse position and probably more or less extended. Version in these cases is a compromising operation and means the death of the child in a large majority of instances, but is the safest operation for mother in private practice.

I agree with Dr. Stewart that in cases of placenta prævia, centrally located, the hæmorrhage occurs early, before viability as a rule. The cases of placenta prævia in which Cæsarean section would be justifiable, I think, are those in which we have central implantation, in primiparæ with an undilated os and little hæmorrhage.

Dr. A. J. DOWNES: Five years ago I was requested to confine a woman who had lost two children after delivery with forceps and anæsthesia. One child was born dead; one died immediately after delivery. I had measured the woman and decided to do symphyseotomy. She fell into labor, but when I reached the house the child was born. The first two children were males; the third was a female with a very small head.

In the spring of '99 I was again asked to attend this woman. I did not see her until 5 o'clock in the morning of the 4th of July, 1899, when she had been in labor five hours. The membranes had ruptured, there was meconium in the vagina and as I thought she would have little chance at home, I had her moved to St. Mary's Hospital. She entered the hospital at about seven o'clock. I thought possibly I might deliver with instruments. The pain had been very severe and the woman was beginning to yield to the severity of the labor. As the heart beats of the child were becoming weaker I thought it best to give her the quickest delivery possible and opened the abdomen and uterus. The child was blue and apparently dead, but after about thirty minutes' work it revived. In this case the uterus had a large amount of meconium. There was fear of infection and the uterus was filled temporarily with hot sponges. The uterus, after thorough cleansing, was closed by two tiers of catgut. A rapid through and through suturing of the abdominal wall was done. The patient nursed the child and both left the hospital in 28 days, after an aseptic course.

Dr. BOYD: My own experience has differed from that of Dr. Stewart in regard to early hæmorrhage in central implantation in placenta prævia. In 75 per cent. of cases the hæmorrhage has not occurred until after the viability of the child. Moreover, the hæmor-

rhage does not appear until a few weeks before term. So the question of viability is one that need not give us great thought in very many cases.

If we consider that the maternal mortality of Cæsarean section is only 1 or 2 per cent., we might say there is no mortality connected with the placenta prævia. If we admit that the maternal mortality of placenta prævia is 10 to 12 per cent., and the foetal mortality 75 per cent., it would hardly seem that treatment by dilatation of the cervix, podalic version, the usual course, is an ideal one. Should I have such a case under my care, with hæmorrhage developing near term, if I found upon careful examination there existed central and partial implantation of the placenta with a rigid cervix, I would lay the facts before the patient, letting her know the mortality and give her the opportunity of electing the Cæsarean section. Cæsarean section would be performed with almost nil foetal mortality and I feel sure the maternal mortality would not be higher than 10 per cent.

*Report of a Case of Carcinoma of the Uterus: Exhibition of Specimen.*

DR. H. D. BEYEA: I have a specimen which may be of some interest to the Society. The woman was fifty-one years of age and was taken last spring with cardiac pains in the back. They grew worse and became intestinal pains. She was treated during all of last summer by applications to the vaginal vault, thinking the condition was one of enlarged uterus. She passed the menopause at forty-five, when she began to bleed. I saw her four days ago, when I found the cervix that of a virgin; the os not dilated. No hæmorrhage followed the examination. The uterus was retroverted and pressed upon the rectum. The body of the uterus felt hard. There was a branny feeling or as if there were cracklings beneath the finger, like calcification. There was a question of diagnosis between carcinoma of the body of the uterus and calcified fibroid tumor. From the history of hæmorrhage and pain so severe as to compel the use of suppositories I came to the conclusion that the case must be one of carcinoma. Since she was suffering so much I did not wait to make a positive diagnosis but did abdominal section, performing a panhysterectomy and have here the specimen showing the diffuse carcinoma that destroys all the corporal portion of the uterus. It extends to about an eighth of an inch to the peritoneum in the lower uterine segment. The tubes and ovaries were normal. The cervix shows no sign of infiltration and I feel very sure from that that I have removed all carcinomatous disease.

There is also no glandular enlargement.

The case reminds me of one operated upon by Dr. Penrose seven years ago. The woman was sixty-one years of age, with a carcinoma of this sort. She had been curetted and her condition was said to be hopeless. She was seen by another specialist. The condition was diagnosed carcinomata and she was said to be beyond hope. It was thought that the infiltration extended back into the rectum, because the uterus was immovable. There was no portion of the uterine muscle tissue. All was destroyed to the peritoneum. You could see cancerous nodules which certainly after a few weeks would perforate the peritoneum and result in death to the patient. The two cases show how resistant the peritoneum is to carcinomata. The woman operated on, seven years ago, is perfectly well. There is no indication of recurrence and she is walking about town most every day.

I show the specimen because of the extremely advanced condition of the carcinoma.

Official Transactions.

FRANK W. TALLEY, M.D., *Secretary.*

---

## ABSTRACTS.

*This Department is in Charge of the Following Staff of Sub-Editors:*

DR. T. W. CLEAVELAND, DR. G. H. MALLETT, DR. A. D. CHAFFEE.

## PÆDIATRICS.

## UNITED STATES.

*Bronchitis and Broncho-pneumonia: Treatment in Children.*

J. C. LAWRENCE (*The Columbus Med. Jour.*, March, 1901) does not believe in stimulating expectorants in the early stages of these affections. A brisk calomel purge, small doses of aconite and sweet spirits of nitre will lessen arterial tension and reduce fever. Mild counter-irritants to the chest, soaking the feet in hot mustard-water and small doses of Dover's powder at night are also valuable. Nourishment is of prime importance, and should consist of nutritious, easily assimilable articles. Brandy is the best stimulant when one is needed.

When the child is not seen until the disease is advanced, a mixture containing one and a half minims of syrup of ipecac and three grains of citrate of potash, given in syrup of lemon every two hours to a child two years old, will relieve the dry stage. After a free flow of mucus is established the writer uses the following formula:

℞ Morphinae muriatæ.....gr. ss  
 Antimonii et potass tart.....gr. ss  
 Amonii chloride.....gr. xvi  
 Ext. glycyrrhizæ fl.....oz. j  
 Aquæ lauro-cerasi q. s. ad.....oz. ij  
 M. Sig. Half-teaspoonful every two hours.

Where mucus accumulates in the bronchi in a young child ipecac to promote vomiting is sometimes the best way to remove it.

While local applications to the chest are no longer popular, the writer has found applications of antiphlogistine to be of great service, by increasing capillary circulation and by its hygroscopic effect relieving both nervousness and irritability of the bronchi. The can containing the antiphlogistine should be placed in hot water until its contents are as hot as can be borne. A layer one-eighth of an inch in



thickness is spread over the back, sides, and chest, covered with absorbent cotton held in place by a muslin jacket. This may remain on twenty-four hours.

*Premature Infants.*

VANDERPOEL ADRIANCE (*Amer. Jour. of the Med. Sciences*, April, 1901) has had unusual facilities for the study of this class from the observation and records of forty cases seen at the Nursery and Child's Hospital of New York. Twenty-four of the children died, but eleven of these died of the infantile diseases of later life, none of these dying until the period of full term was passed. Of the remainder four died of cyanosis, autopsy showing that the condition was due to atelectasis of the lungs. Cyanosis and hemorrhage, and cyanosis with œdema accounted for two more deaths. In two cases hemorrhage alone caused death. Autopsy in these cases showed large clots in the lateral ventricles in one, and hæmorrhage in the suprarenal capsule with rupture and the formation of a large retro-peritonæal clot in the other. Anæmia was the only apparent cause in one case and in the remaining four there was no assignable cause. The appearance of a premature infant is well known. It should be remembered that owing to the soft and pliable conditions of the bones the symmetry of the head is easily destroyed by pressure, and the infant should not be allowed to lie continuously on one side. The maintenance of bodily heat is of utmost importance. Premature children usually have a subnormal temperature, but the temperature range is often very erratic for several days. This is often due simply to immaturity and lack of adjustment, but it may be due to gastro-intestinal trouble or to an overheated incubator. The temperature of the incubator may be as high as 95° F. for a few days where the infant is very puny and immature, but 90° F. is sufficient in ordinary cases and this must be carefully reduced if the infant's temperature is continuously above normal. The incubator is usually needed until the child reaches an age corresponding to full term, and may occasionally be required longer. The temperature should be gradually reduced until it corresponds with that of the room.

The child must be handled as little as possible. Baths must be prohibited for some time; the thighs can be cleaned when necessary with moist absorbent cotton. The ordinary napkin is better dispensed with and a pad of soft cotton substituted. A soft garment or wrapping of cotton between layers of fine cheese-cloth is the only clothing required.

Respiration is irregular, the rhythm often resembling the Cheyne-

Stokes. Even after first stimulated to its task the respiratory center may fail and cyanosis result. These attacks of cyanosis are serious and must be promptly treated by the administration of oxygen and minim doses of whiskey. This trouble often appears after taking food and may be due to milk in the larynx; inversion of the infant and gentle patting on the back will relieve this. Distention either of the stomach or bowels may embarrass respiration. The intestines demand close attention, as their action is sluggish. Stagnation of feces often results, and owing to the lack of muscular tone herniæ occur in many cases. Small doses of castor oil are useful. The liability to attacks of cyanosis decreases with time, no death due to them having occurred after the tenth day. The ductus arteriosus and foramen ovale appeared to have no part in these attacks, for both post-mortem and clinical evidence showed a closure of these structures.

The premature infant weighs less and the constructive processes are slower, so that in the average of the cases the birth-weight was not regained until the thirtieth day, while in normal children it is usually regained by the tenth day. The stomach is very small, accommodating from one to two drachms at a feeding. The interval of feeding should be about one hour at first. Where the infant is too weak to nurse the milk is best offered in a medicine dropper, a few drops only at a time. Gavage should be avoided if possible. Fats and proteids are feebly digested, so that if modified milk is used it should contain not more than 1 per cent. of fat and 50 per cent. of proteids. Mother's milk is preferable, but *not* the milk of the child's mother. The milk offered by the breasts after premature labor is colostrum milk and has its characteristics of an excessively high percentage of proteids and salts in an exaggerated degree, and while ordinary colostrum milk soon adjusts itself, the milk of prematurity maintains this high percentage of proteids persistently. It may be somewhat reduced by giving the mother large quantities of water or by adding milk-sugar solution to pumped-out milk, but even then it is not the best food. The best food is the milk of a wet-nurse with a healthy infant from two to four weeks old. The mother's breasts may be pumped and massaged, and when examination shows that the milk is correct in composition the change from wet-nurse to the mother may be carefully and gradually made.

*Indications for Renewal of Plaster of Paris Jackets in Tubercular Spondylitis.*

DEXTER D. ASHLEY (*The Post-graduate*, April, 1901) says that

children wearing plaster of Paris jackets for this trouble should be examined at least once a month, and the application of a new jacket is demanded usually about once in three or four months. In some instances, however, there is such rapid improvement in flesh and general development owing to the improved position, support and practical immobilization given by the jacket that it is outgrown very soon, so that the chest muscles roll over the top while below the abdominal walls are protruded with every breath. This latter condition predisposes to hernia and visceral displacement and must be guarded against in the application of plaster jackets by the use of a large dinner pad, and by extending the jacket low enough to support the abdominal walls. In other cases the child loses flesh, and on examination it is found that the jacket can be moved up and down two or three inches, no longer affording support or immobilization. This also demands the immediate application of a new jacket, no matter how short the time since the first jacket was fitted. In other cases the plaster becomes soft and breaks down, by reason of poor workmanship or poor plaster. Where the surroundings are unclean the jacket may become infested with pediculi and must be removed. In still other cases a peculiar odor is perceptible, always due to the presence of an excoriation in contact with the plaster. In these cases it is never advisable to attempt to cut down the jacket, dress the excoriation and reapply the jacket with adhesive plaster to hold it in place. The jacket should be removed, the excoriation cleaned, washed with bichloride <sup>1</sup>/<sub>1000</sub>, dried and dusted with aristol. The entire body should be rubbed vigorously with alcohol and dusted with powder before applying a new jacket. In other cases, where a sinus exists, a window may be cut through the jacket and trimmed around with adhesive plaster. Through this window the sinus may be syringed out each day with hydrogen peroxide followed with 2 per cent. carbolic solution if the discharge is profuse. The carbolic alone is sufficient where the discharge is slight.

In removing a jacket apply a cloth saturated with bichloride over the proposed line of incision to render the cutting easier. The patient should lie on his stomach or support himself on his hands and knees while the jacket is sprung off, but never allowed to stand or sit upright while the jacket is being removed. In moving patients while the jacket is off the spine must be carefully supported in the hyper-extended position. Where the disease is located in the lower or middle dorsal the patient should lie prone, a supporting hand being placed under the upper sternum and another under the pelvis. Where the disease affects the upper dorsal or cervical vertebrae, the patient should lie

supine, supported with one hand under the kyphosis and the other under the pelvis, the weight of the patient's head extending the spine.

Before applying the new jacket the progress of the disease may be ascertained. With the patient prone the knees are bent and the patella reflexes tested; if these are exaggerated there is extension of the disease into the tissues of the spinal cord. Next with firm pressure over the sacrum each hip is brought to hyper-extension. Where there is slight flexion or limited extension a psoas abscess must be looked for. Then with the patient prone and a hand placed over the kyphosis, carefully elevate the legs and the pelvis; if the erector spinæ muscles spring into spasm, or the kyphosis gives under the hand, ankylosis is incomplete and the disease still active.

#### *Rectal Feeding in Throat Disease.*

A. C. BARDES (*N. Y. Med. Jour.*, April 6, 1901) says that the throat, like any other portion of the body, when diseased will recover more quickly if given absolute rest, and the taking of food, even liquids, often gives rise to so much discomfort that children can not be compelled to take sufficient nourishment except by force, which tends to weaken the heart. The use of a stomach tube always excites rebellion and often causes great distress. Moreover, in diphtheria, and frequently in scarlet fever, the mucous membrane of the throat loses its acute sensibility and food often gains access to the larynx without being expelled; this danger is avoided by rectal feeding. The throat is, moreover, kept comparatively free from bacteria. In intubation cases one of the sources of danger is the entrance of food into the tube, either asphyxiating the child or else causing severe coughing which may expel the tube. In cases of quinsy, even after incision, the constrictor muscles are hampered in the performance of their function, so that food and drink will wholly or in part be forcibly ejected from the nose, causing distress, weakening the patient and delaying recovery. After the removal of tonsils and adenoids the act of swallowing is so painful for some time that too little food is taken, whereas the little patient needs a full supply of nourishment. In all of these cases rectal feeding will supply the needed nourishment without irritation or danger and recovery will be hastened. After operations for cleft palate, primary union will be best secured by giving rectal alimentation, affording absolute rest to the throat.

Before administering the nutrient enemata a cleansing injection of saline solution should be given, and the rectal feeding may begin one



hour later. The quantity of food should range from one to six ounces, according to the age of the patient, and the intervals between feedings should not be less than three hours. When the rectum is irritable from one to ten drops of laudanum or fifteen grains of cornstarch may be added to the enema. The child should lie upon its side, with the knees flexed. A soft rectal tube or a No. 12 male catheter is introduced into the rectum about five inches; to the end of the tube is attached a piston syringe by which the warm nutrient fluid is slowly injected. The tube is slowly withdrawn and the patient kept quietly in the same position for fifteen or twenty minutes. The enemata are best composed of predigested or peptonized foods, prepared either by the cold or warm process. A well-beaten egg may be added to peptonized milk for older children. Whey may be used without diluting. The carbohydrates are also readily absorbed. Milk is probably most readily absorbed and least irritating. The temperature of the enema should be 105° F. Where stimulation is indicated whiskey or brandy may be incorporated with the enema. Rectal alimentation may be kept up from one to three weeks, according to the throat indications.

The above remarks apply also to throat trouble in adults. The writer mentions one case of "hay asthma" where the trouble was always intensified by the taking of food. Rectal alimentation was tried with marked relief of the distressing symptoms. Syphilis of the throat, spasm or oedema of the larynx and glossitis are all relieved if the throat is kept at rest.

#### *Deformities or Defects in Development from Adenoids.*

JOHN A. THOMPSON (*The Cincinnati Lancet-Clinic*, April 6, 1901) presents a number of photographs illustrating the disastrous results of unremoved adenoid growths. Any organ not fully performing its function in childhood will not attain its full growth. Where the pharynx is blocked by hypertrophy of the faucial and pharyngeal tonsils the respiratory function of the nose is wholly or partly abolished. Hence result narrow, slit-like nostrils, septal deflections, under development of the turbinated bones and bodies, a flattening and broadening of the upper half of the nose from chronic venous congestion in that region, while the lower half of the nose is pinched. The character and degree of deformity of the mouth depends upon whether the adenoids are present during the first or second dentition or both. When the malformation occurs during the first dentition a dome-like arch of the hard palate results, the highest point being at the front. The curve of the

alveolar border becomes elliptical. During the second dentition these deformities increase. The central incisors are often placed with their posterior surfaces facing each other, and the incisor teeth extend below the lower teeth. The upper lip is usually shortened. In noting the action of the chest it is seen that the supraclavicular and infraclavicular regions retract during inspiration and do not fill up as they should. There is also an excessive sinking in of the intercostal spaces during inspiration. The ultimate result is an antero-posterior curvature of the spine, a narrowing of the upper portion of the chest in front, while the costal cartilages yield to the pressure of the sternum, producing the so-called pigeon breast. The narrowing of the chest means imperfectly developed lungs and a lessened vital capacity.

A large proportion of children with adenoids become deaf, but this is due usually to complicating diseases in the ear. Mental ability is often impaired. The venous congestion of an obstructed nose may induce a corresponding congestion of the anterior lobes of the cerebrum. Impaired general nutrition and the restless, unrefreshing sleep of the mouth-breather cannot but fail to result in impaired nutrition and defective development of the brain. Blood examination of children with adenoids shows anæmia and deficient oxidizing power. It has been the writer's experience, in several cases, that arguments in favor of an operation for the removal of adenoids have failed until the possibility of facial or other deformities have been suggested and their occurrence demonstrated by photographs.

#### GREAT BRITAIN.

##### *The Diagnosis and Treatment of Intussusception.*

CHARLES P. B. CLUBBE (*The British Med. Jour.*, Mch. 23, 1901) speaks of the importance of an early diagnosis in these cases in children. During the last seven years, out of 49 children treated for this complication, 45 were operated upon, of whom 21 died. In the successful cases the delay between the onset of the trouble and the time of operation averaged only twenty-four hours; while in the fatal cases the average time was fifty-six hours. In the four cases not operated upon the intussusception was reduced by injections alone. This simple procedure is always useful and safe, and should be tried first, no matter in what stage the case is seen. From ten ounces to a pint of

warm water and oil should be injected, the child being anæsthetized and the hips well elevated. After the fluid has escaped, if examination shows that the sausage-shaped tumor has vanished, the child should be put to bed and a minute dose of morphine given. Careful examination should be made every six hours for forty-eight hours to guard against a return of the trouble. Neglect of this precaution has led many to underestimate the value of this mode of treatment. Even if complete reduction is not accomplished by the injection it often reduces the mass somewhat and renders subsequent operation easier. In cases, however, where the surroundings are such as to render an operation inadvisable even if found necessary, no time should be wasted in preliminary injections at the home.

*Diagnosis.*—In a large number of cases there is a history of sudden screaming, pallor and vomiting, followed from two to ten hours later by the passage of blood and slime. In the interval between the first attack of pain and the bloody movement the child may have been comparatively quiet, or have had several short attacks of pain and crying. The pulse rate and temperature are not far from normal. With such a history careful examination of the abdomen is demanded, and where the muscles are held rigid a little chloroform should be given. Examination by rectum is rarely useful or necessary. In the early stage nothing can be learned in that way, and later on it is unnecessary, as the tumor can be felt through the abdomen. A word of warning as to cases where the intussusception has descended into the rectum or even out through the anus should be given. Such cases have been mistaken for prolapse of the bowel. Children suffering from diarrhoea may have this complication, and the passage of blood-stained movements may have occurred before the intussusception, leading to the intussusception, when it occurs, being mistaken for an exacerbation of the enteritis. Such cases result fatally, without any recognition of the true state of affairs.

In some cases these signs are all absent, and there is merely restlessness, distention of the bowel, vomiting now and then and possibly slight looseness of the bowels. After twenty-four hours, if the intussusception is at all severe, there will be grave symptoms of obstruction.

Before operation strychnine and morphine should be given hypodermically. A large hot water bag should be placed on the table under the child. When the mass is small and in the ascending colon the incision may be made at the right of the rectus muscle, otherwise in the median line. The peritonæum in babies is so fine that it is well sometimes to hook an aneurism needle into the first small opening and pull

the peritonæum forwards. When the mass is reached find out which is the lower part, then begin gently squeezing the intussusciptions. Just at the last an assistant may assist by gentle traction on the bowel just above where it enters. The intussusception may sometimes be partly reduced while still in the abdomen, but the last part of the bowel that has to be uncoiled must always be brought into view. In cases that have been reduced easily there is sometimes thickening and a small cup-shaped depression at the site of the apex of the intussusception. This must be carefully pressed out and made convex, to prevent recurrence.

When the squeezing begins to cause much cracking and tearing of the peritonæal coating, this method of procedure will have to be abandoned for resection. So also in the ileocæcal variety, where the appendix has been much pinched, or in cases where reduction is impossible, or where the bowel appears much damaged after reduction. End-to-end anastomosis with a continuous suture of fine catgut, putting in a double row, is the best way of uniting the several ends of intestine. After washing the intestines with warm salt solution replace in the abdomen. No matter how great the difficulty of replacement, never be tempted to puncture the intestine. The abdomen is best closed by through and through sutures with no drainage.

Babies must be fed within a few hours after the operation. Mellin's food, whey and water (one drachm to two ounces), or the white of an egg in four ounces of cold boiled water to which one drachm of somatose is added, may be given often in small quantities. After two days breast-fed babies may be nursed; others should be fed on carefully prepared foods. The child should be turned from side to side or carried about occasionally. Morphine in very small doses is usually needed during the first twenty-four hours. Strychnine and digitalin may be given hypodermically as indicated. If the bowels do not move in twenty-four hours a small dose of calomel may be given. The first movement usually occurs in twelve hours after operation and generally contains blood and mucus. The sutures should never be removed before the tenth day, and if they are giving no trouble they may be allowed to remain longer.

*Diphtheria Antitoxin used successfully by the Mouth.*

J. LINDSEY PORTEOUS (*The Lancet*, March 30, 1901) first attempted this method of administration in 1897. A little girl, suffering from a severe form of diphtheria, became so frightened and nervous at the



sight of the needle that 1,000 units of Behring's preparation were given by mouth instead of hypodermically. Recovery was satisfactory. Since that time this preparation has been given by mouth in several cases with no deaths. From 1,000 to 2,000 units have been given for the first dose and may be repeated if necessary.

*A Case of Pemphigus Neonatorum in an Infant Three Days Old.*

VICTOR J. HODGSON (*The Lancet*, March 30, 1901) reports the case of a full-term female child who three days after birth developed bullæ on both eyelids containing a transparent fluid and surrounded by a red ring. On the following day a large bulla appeared on the abdomen and others followed in the groins, outer parts of the thigh and on the nape and sides of the neck. The child's health remained good for ten days, then the bullæ having either become pustular or broken, the child became fretful, passed offensive movements and had one convulsion. The trouble passed away without general desquamation in about three weeks. Congenital syphilis was out of the question, as both father and mother were perfectly healthy and had been, there was a child three years old, perfectly well, and the eruption did not appear on the soles of the feet, the palms of the hands or the nates. The umbilical cord separated normally without any possibility of infection at this point. There was some delay in cleansing the child's eyes, and they had received a gush of amniotic fluid; this may have had some etiological bearing, as the trouble first appeared in the eyelids.

*A Note on the Knee-Jerk in Chorea.*

W. GORDON (*The British Med. Jour.*, March 30, 1901) describes a peculiar modification of the knee-jerk which, while it is not present in every case, nor constantly present in the same case, is peculiar to chorea, and when it is present is unmistakably diagnostic of the disease. In doubtful or obscure cases its presence is of value. With the patient recumbent, the knees raised and heels allowed to rest on the couch, after making sure that all the muscles of the limbs are relaxed, the knee-jerk is tested in the usual manner. The foot will rise more or less smartly, but instead of falling back immediately will remain suspended for a variable time—hung up as it were—and then slowly sink back to its initial position. Variations occur: sometimes there is merely a sluggish descent; sometimes, as the foot is beginning to fall, it is ar-

rested in mid-air, held for a time or even raised to a higher level than the first jerk; sometimes the knee-jerk passes at once into an active, more or less persistent, rigid extension of the limb. In "hemichorea" it is found only on the choreic side.

The writer regards this phenomenon as due to the overflow of impulse from cortical centers closely associated, so that voluntary movements initiated in one overflow into involuntary movements due to impulses communicated to the others.

*An Easy Operation for Congenital Ptosis.*

FREELAND FERGUS (*The British Med. Jour.*, March 30, 1901) describes an operation for this condition which is efficient, easy and so arranged as to leave no cicatrices or scars. A horizontal linear incision was made in the eyebrow along the whole extent; no other skin incision is required. The skin was completely separated from the underlying tendon and fascia of the occipito-frontalis muscle, the separation being carried nearly two inches above the horizontal wound. In the opposite direction the skin, fascia and portions of the muscular structure were separated from the orbicularis muscle and from the tarsus, the division extending nearly to the free margin of the eyelid. Next a vertical band of the tendon and fascia of the occipito-frontalis, three-quarters of an inch broad and two inches long, was dissected up until its only attachment was to the occipito-frontalis at the part farthest away from the skin incision. The end of this band was then drawn down into the upper eyelid and its margin secured by catgut sutures as near the margin of the lid as possible. The skin wound was then closed and covered with an antiseptic dressing. Two photographs taken a month after the operation are given, one with the eyes open, showing the complete overcoming of the ptosis, the other with the eyes closed, showing that there was no difficulty in closing the palpebral fissure. The growth of hair on the eyebrow soon completely hid the scar of the incision.

*A Case of Tetanus Neonatorum successfully treated with Antitetanus Serum.*

JOHN McCaw (*The British Med. Jour.*, March 30, 1901) reports the case of a full-term child with healthy skin and mucous membranes, delivered by a neighbor after a somewhat tedious labor. The cord was divided with the ordinary house scissors and wrapped in a piece

of old cloth. The child was well until the ninth day, when it could not nurse and there was stiffness in the neck and shoulders. Three days later a physician was called, who found the child's temperature  $99^{\circ}$  F., pulse 130, and respirations normal except during spasms. The whole body seemed to be in a state of tonic spasm. The jaws were rigidly closed and *risus sardonicus* was marked. Muscular irritability was extreme, the least movement developing a general spasm lasting about half a minute, during which the baby became deeply cyanosed and uttered a suppressed cry. The heart sounds were normal and the pulse ranged from 160 to 170, slowing during the spasms. The umbilicus was covered with foul-smelling pus and slough, while the surrounding tissues for half an inch were thickened and red. The mother said the navel had not been dressed since the separation of the cord on the fifth day. A culture was taken from the wound and the child removed to the hospital, where it remained under the writer's care until recovery. The result of the culture showed a plentiful growth of bacilli having the characteristics of the tetanus bacillus (flagellæ, end spores, etc.). A mouse inoculated with the culture died in twenty-four hours.

Five c.cm. of tetanus antitoxin was injected under the skin of the abdomen, the navel cleansed with boracic lotion and a boracic fomentation applied every two hours. Nourishment was given by prepared cow's milk introduced at the side of the mouth and allowed to trickle down the throat. The temperature rose to  $104^{\circ}$  F. by evening and the spasms were very severe whenever the child was fed or moved, but it slept some in the intervals. The next day the spasm of the masseters was less pronounced and the child could feed from the bottle; the bowels acted, perspiration was free, urine was passed, and the temperature had fallen to  $101.8^{\circ}$  F. In the evening the temperature was  $104.8^{\circ}$ , and by morning it had reached  $105.6^{\circ}$ . It soon fell to  $101^{\circ}$ , and the child took the bottle well, the spasms occurring only when it was moved. Toward evening the respiration became rapid and the temperature rose to  $108^{\circ}$ . An ice-bag was applied to the upper dorsal region over the spine, which reduced the temperature to  $103.6^{\circ}$  in one hour. It soon rose again and  $2\frac{1}{2}$  c.cm. of the antitoxin were injected and the ice-bag reapplied. The child seemed better, but would occasionally cry out and go into a spasm even when lying quietly. There was marked improvement the following day: the intervals between the spasms increased, although the severity of the attacks was not diminished. Any rise of temperature was controlled by the ice-bag. After that the rigidity gradually diminished, the temperature became normal

and the child gained in weight until it was sent home perfectly well about one month later. The majority of the cases of this disease treated with antitetanus serum have resulted fatally, but the writer attributes this to the late use of the serum. Where the antitoxin is to be successful it must be used early and a large initial dose is better than a repetition of small ones. The intracerebral method of injecting the serum has been used with adults to bring the remedy quickly in contact with the nervous system. It would seem that this operation could be very easily performed through the open fontanelle of an infant.

---

## GYNÆCOLOGY.

### UNITED STATES.

#### *On the Desirability of Combined Operations in Pelvic and Abdominal Surgery.*

W. P. MANTON (*The Phila. Med. Jour.*, March 2, 1901) says that among gynæcological patients is the rule to find not one but a number of abnormal conditions, each of which has a bearing on the patient's health and comfort, and demands a distinct operation for its relief or cure. Clinical experience and pathology have taught that the best results cannot be expected from the restoration of one surgically diseased part when lesions of associated structures are allowed to continue undisturbed. The adjustment of all the disordered elements must be collectively re-established in order to perfectly restore the individual defect. Experience has further shown that several operations performed at one sitting do not compromise the life of the patient appreciably; the extra time within reasonable limits does not add to the danger, and the repair in the individual parts goes on as rapidly and successfully as when a single uncomplicated operation is performed. On the other hand, after the ordeal is over, the patient's mind is free from the dread of further operations, convalescence is not retarded by the presence of morbid structures or conditions left behind, and recovery is not partial but complete.

In the writer's opinion, in every instance, whatever is necessary should be done, whether the conditions lie in the plevi, the abdomen, or both; and the limit of execution should be gauged only by the pa-



tient's general condition, her behavior under the anæsthetic, and the inherent dangers of the operations to be performed.

### *Three Dangerous Operations.*

JOHN B. DEEVER (*Phila. Med Jour.*, March 2, 1901) refers to the repair of lacerated cervixes, the rapid dilatation or divulsion of the cervical canal and curettement of the uterus. While these are excellent and beneficial procedures when performed intelligently, they are capable of much harm when done indiscriminately and without proper precautions.

Lacerated cervix is so common that without special indications it is better to let it alone. The indications for repair are: (1) Gaping of the edges of the tear and consequent exposure of the cervical mucous membrane; (2) ulceration; (3) a large amount of hard scar tissue; (4) subinvolution; (5) hereditary tendency to malignant growths. It is contra-indicated in cases where salpingitis, pyosalpinx or adhesions exist. The breaking up of peri-uterine adhesions by bringing the uterus down to the vulvar orifice often liberates septic foci, giving rise to peritonitis.

The indications for curettement are retained foreign matter, usually post-puerperal, acute and chronic endometritis. The possibility of lighting up a latent salpingitis or sepsis must be borne in mind. Gonorrhœal infection positively prohibits curettement. The amount of information to be gained from an examination of specimens obtained by curettement is not satisfactory, as the specimens are small and fragmentary. In advanced carcinoma, where radical operation is impossible, curettement followed by cauterization will lessen the patient's discomfort.

Dilatation of the cervical canal is ordinarily both inefficient and dangerous, and offers no advantages over divulsion. Where there is dysmenorrhœa, due to cervical sténosis and displacement of a non-adherent uterus, dilatation is indicated as a preliminary step to curettement. But this operation, as well as the two others, requires thorough antiseptic preparation; too often they are regarded as comparatively trivial and carelessness is permitted. Where these operations are demanded in the presence of adhesions or inflammatory conditions the operator must be prepared to correct such conditions by abdominal operation.

---

*The Immediate and Remote Results in One Hundred Conservative Operations on the Ovaries and Tubes with Brief Reports of Four Cases.*

W. L. BURRAGE (*The Medical News*, April 13, 1901) classes as conservative operations all cases in which, an operation on the appendages being performed, one ovary or a portion of one ovary, or one tube or a portion of a tube, was left behind. Out of 156 cases thus treated, 100 have been under observation for at least a year since operation. The writer's rule in performing multiple operations is to do nothing more that can be, well done in two hours at the outside from the first incision to the tying of the last suture. The majority of cases require much less time. At first there was a tendency to pain and enlargement of resected ovaries, probably due to hæmorrhage from free puncturing of cysts; since more careful measures to promote hæmostasis have been taken these unpleasant symptoms have been rare. In a few old gonorrhœal cases pelvic inflammatory exudate about the ovary and tube has been noted following resection of the tube. Where hysterectomy for fibroids has been performed the preservation of an ovary or even part of one has lessened the symptoms of the artificial menopause. In all cases the amount of ovarian tissue left seemed to bear no definite proportion to the amount of menstrual flow or the intensity of sexual desire. In seventy-three out of the one hundred cases there was symptomatic cure; a large number of the others were pronounced neurasthenics, while others were women over thirty-five years old, with long-standing tubal or ovarian disease. In this latter class complete removal of the adnexa would probably be wise in most cases. Thirty-two per cent. became pregnant subsequent to operation, but in no case did pregnancy follow the resection of a closed tube when both tubes were closed at the time of operation. When the tubes are patulous at the time of operation, subsequent pregnancy is common, even if only a small portion of tube is left. In one of the cases fully reported one tube and a third of one ovary remained, and a normal pregnancy occurred two months after the operation, resulting in the birth of a healthy child. In a case of a woman six years married and sterile, pregnancy and the birth of a child followed resection of both ovaries, the tubes being normal. In another case pregnancy occurred twice after complete removal of both tubes and one ovary, the other ovary not being found at the time of operation.

*Tracheloplasty.*

HENRY PARKER NEWMAN (*Jour. Amer. Med. As.*, April 20, 1901) says that since the time when Pallen wrote of the normal and pathologic significance of the cervix uteri and the importance of the cervical function, there have been great advances in gynæcology and obstetrics, but causes still exist resulting in mal-nutrition, mal-development, infections and traumatisms of this portion of the genital tract. In milder cases there is a choice between a prolonged course of routine palliative treatment and more radical surgical procedures. It is certainly a detriment and an annoyance to most women to undergo prolonged local treatment, and a surgical procedure which requires little in the way of preparation or after-treatment is to be preferred.

The writer had called his operation "tracheloplasty" before learning that Parvin had once given the same name to the early work of Emmet, but as the latter never accepted it, the writer feels free to adopt it as best descriptive of the nature and intent of his method. After dilatation of the cervix and cutterage of the uterus, the cervix is drawn well down by a double tenaculum which has its points reversed, being directed from within outward laterally, thus making traction upon the inner area of the cervix. The cervix is then transfixed by a special right-angled knife and a clean cut made from above downward in the posterior lip. The anterior lip is then transfixed about 1 or 1.5 cm. in front of the other and cut in the same way. The intervening plug of diseased or scar tissue is removed with scissors, the tenaculum having been changed to a lower position to allow of it. The flaps thus made will fall together and inwards, assuming the appearance of a normal cervix, and are sutured into position. The first suture is passed through the center of the anterior flap, a centimeter from its cut edge and brought out about three-quarters of a centimeter within the cervical canal. Two parallel stitches are placed at each angle of the cervical canal. The posterior lip is treated in the same manner except that the stitches are passed from within outward, while the reverse is true of the anterior lip. Two stitches are now passed, as in trachelorrhaphy, through the outer angles of the wound. In tying the sutures one end of each is left long, and these long ends are grouped by tying them together according to their location, the three anterior sutures forming one group, the three posterior another, while the lateral sutures are tied together, a pair on each side. Silkworm gut is best. A uterine tampon of iodoform gauze or wicking is inserted, a projecting strand being attached to a vaginal gauze tampon in order that both may be

removed without disturbance. The usual perinæal dressings are applied and the external genitals are bathed with antiseptics after urination. No douching or disturbance of the tampons is allowed until the second or third day, when the entire tampon is removed. Then vaginal douches of 1 to 4,000 bichloride are used twice daily. The sutures can be removed in two weeks.

This operation is quick, easy, presents clean, smooth-cut surfaces, the flaps are easily approximated, and hæmorrhage is avoided by deep sutures compressing the flaps. The approximation of mucous membrane to mucous membrane is exact, avoiding granulating surfaces, formation of a cicatrix, or constriction of the canal. The result is a well-formed patulous canal and profound reduction of the hyperplastic uterus. The neglect to perform needed complementary work will lead to failure, no matter what the operation on the cervix be. The uterus must be in normal position, the perinæal floor intact, and the adnexa healthy in order to obtain perfect results. Operation on the cervix alone is seldom called for.

#### *The Use of Hot-water Vaginal Injections.*

JAMES HAWLEY BURTENSHAW (*N. Y. Med Jour.*, April 20, 1901) thinks that this most valuable adjunct in the treatment of pelvic disease has fallen into disrepute through a misunderstanding of its proper method of application. The fault usually lies in the failure of the physician to give sufficiently minute directions. The principles underlying the use of the vaginal douche are to be borne in mind. While a douche for mere cleansing purposes may be used at varying intervals and consist of a small amount of moderately warm water administered in any position most convenient to the woman, such douches are of no therapeutic value. The initial effect of water at a temperature of from 105° to 120° F. upon the tissues is to dilate the blood-vessels, congesting the parts, while the secondary effect is that of contraction, driving out the excess of blood and lessening the congestion. Consequently the use of two quarts of hot water, which will flow through an ordinary tube and vaginal nozzle in exactly two minutes, can do no more than add to pelvic congestion already present. In cases where it is desired to *increase* the amount of blood in the pelvic vessels such a douche would be of service, but where pelvic congestion already exists harm must follow. At least three gallons of water as hot as can be borne (from 107° to 120° F.) must be used for such douche, and this should be taken twice daily, except for two days preceding



and two days following and during the menstrual flow. The patient must lie flat on the back, with hips higher than the shoulders, and should rest for at least half an hour after each douche. The douche may advantageously be taken in the bath tub, to allow of the outflow of the large quantity of water. Or, where there are few conveniences, two boards, a few inches apart, may be placed across an ordinary wash tub, the woman's hips may rest on the boards, while her head and shoulders are supported on a chair.

Such douches are of great value in acute and chronic metritis, in subinvolution, in perimetric inflammation and in pelvic exudations. Leucorrhœa is usually checked by the toning up of the vaginal and uterine mucosa by the plain hot water, but where it persists 1 tablespoonful of the following mixture may be added to the last quart of water in the douche bag:

|   |                      |                 |
|---|----------------------|-----------------|
| R | Powdered alum.....   |                 |
|   | Zinc sulphate.....   | - each 1 ounce. |
|   | Sodium biborate..... |                 |
|   | Carbolic acid.....   |                 |
|   | Water .....          | 6 ounces.       |

In elytritis, characterized by a discharge of acid reaction containing bacteria and membranous shreds, one teaspoonful of bicarbonate of soda may be added to each quart of water. Astringents must not be used in these cases. Bichloride of mercury, lysol, or creolin should not be constantly employed in the ordinary therapeutic douche, as the hot water greatly increases the absorptive power of the mucous membrane and renders the frequent use of such antiseptics dangerous. Healthy pregnant women should never employ large hot-water douches, as they reduce the bactericidal power of the vaginal secretions. Reclus, of Paris, prefers the use of hot enemata in pelvic inflammations. He uses the water at a temperature of from 122° to 131° F. As large a quantity as can be tolerated is slowly introduced into the rectum, and retained thirty minutes. The writer has found the discomfort attending such injections too great to be tolerated by most patients. In addition to the use of these large hot-water douches for local pelvic inflammations they act as a general systemic tonic in cases of general debility, and are a valuable adjunct to other methods of treatment.

## GREAT BRITAIN.

*Uterine Tumors in Infancy, Childhood and Early Life.*

W. ROGER WILLIAMS (*Med. Times and Hosp. Gaz.*, March 23 and 30, 1901) says that few parts of the body are so little liable to tumor formation in early life as the uterus; this is probably due to the rudimentary and functionless condition of that organ up to the time of puberty.

Of 1,762 cases of myoma reported by different writers, only 26 were under twenty years of age. The youngest patient was nine years old, and had a large abdominal tumor of several years' duration. Laparotomy was performed, and twenty-one uterine myomata—mostly subperitonæal—were removed. The patient died from shock. Uterine cancer is very rare under the age of twenty, and is unknown prior to puberty. The earliest age at which uterine cancer has been duly substantiated is seventeen years. Several cases of so-called cancer of the uterus at an earlier period have been reported, but the nature of the growth was, in each case, not really cancerous. The only form of malignant uterine tumor in early life which is not very rare is sarcoma. Although no example of congenital malignant disease has been recorded, it is probable that most of these infantile sarcomata are of blastogenic origin. The most common form is a polypoid tumor springing from the inferior segment of the uterus, and often accompanied by multiple polypoid excrescences of the adjacent mucosa. As a rule, these growths recur quickly after removal, and are otherwise malignant. One case of uterine sarcoma reported by Péan was in a child two years old, whose mother and grandmother both died of malignant uterine disease. Racemose, or botryoidal sacromata, have been reported in young girls by several different writers.

The ordinary sub-inflammatory polypoid formations are very rare in infancy and childhood. Lewis Marshall reported a case of papillomatous cauliflower excrescences of the portio in a child two and a half years old. Attention has recently been called to a congenital form of mucosal uterine polypus, met with by Friedlander, Maudach and Spencer in newborn infants. It occurs as a solitary growth, the size of a pea, at the level of the internal os, and the structure is usually similar to the cervical mucosa. There is often accompanying enlargement of the uterus, and sometimes a retention of uterine secre-

tion due to the growth. These growths, so far as studied, have no tendency to become malignant.

*A Case of Acute Intestinal Obstruction Due to Papillomatous Ovarian Cyst and a Carcinoma of Small Intestine.*

H. SAVORY and W. G. NASH (*The British Med. Jour.*, March 23, 1901) report the case of a widow, forty-five years old, who, after a fifty-mile ride on her bicycle, was attacked with severe pain in the abdomen, and soon the symptoms of intestinal obstruction appeared. Per vaginam a solid mass could be felt in the pelvis, while a tender, fluid swelling occupied the left side of the abdomen, reaching to the umbilicus. Immediate operation was advised, but refused. Injections of turpentine, morphine hypodermically, and rectal feeding relieved the symptoms, and the bowels moved the next day. The tumor remained tender, and in a week had increased to twice its size. Colicky pains persisted. Ovariectomy was consented to, and performed twelve days later. The thin-walled cyst ruptured during the preparation of the abdomen. The tumor was a large multilocular papillomatous cyst of the right ovary, with a solid portion the size of a foetal head firmly adherent to the bowel. An annular stricture of the small intestine caused by a solid growth was noticed, and some enlarged glands in the mesentery, but as the patient was in collapse the abdomen was closed without further interference. Twelve days later the abdomen was again opened, and four inches of small intestine and a V-shaped piece of mesentery containing the enlarged glands were removed. The ends of the intestine were united by an Allingham's bobbin, which came away by rectum on the fifth day. The bowels continued to act naturally. The growth was a cylindrical carcinoma, the lumen of the involved intestine barely admitting a goose quill. Six months later the patient is in good health, with no recurrence evident by bimanual examination. The bowels act freely with aperients, but there is often pain and difficulty in passing gas.

*A Uterus Which contained One Hundred and Twenty Fibroids.*

J. BLAND SUTTON (*British Med. Jour.*, April 6, 1901) performed hysterectomy for profuse hæmorrhages due to fibroids. The uterus had a peculiar oval shape, measuring 10 cm. vertically and 15 cm. transversely. The cavity was completely filled with four sessile fibroids so moulded to one another as to form facets on their contact surfaces. The

cut surface of the uterine wall was thickly dotted with small rounded fibroids varying in size from a coriander seed to a cherry stone, and numbering 120. The very smallest were examined particularly, and in all the structure was plain muscle tissue, and the alternate and whorled disposition of the spindles was very striking. The tumor cells were so disposed around the blood-vessels, the bundles of plain muscle fibers twining around and so intimately associated with the walls of the capillaries as to suggest that the muscular coats of the vessels are the source of fibroids. In spite of the most careful staining methods it could not be seen that the fibroids were related to the nerves of the uterus in the way that molluscum fibrosum nodules are related to the cutaneous branches of the nerves. These minute fibroids were precisely similar to large, fully developed ones. And each was sharply differentiated from the uterine tissue by a thin capsule from which it could be enucleated. The length of time required for one of these embryonic fibroids to acquire mischievous dimensions is an interesting question but unanswerable. Although many hundreds of uteri containing fibroids have been examined by the writer he has never seen or heard of one in any way resembling this specimen.

---

## OBSTETRICS.

### UNITED STATES.

#### *The Rôle of the Kidney in the Production of the Toxæmias of Pregnancy.*

B. VAN SWERINGEN (*Fort Wayne Med. Jour.-Magazine*, March, 1901) says that the majority of text-books say that diminution in the amount of urine secreted and lessened excretion of urea are important danger signals in pregnant women, indicating the possible or even probable occurrence of eclampsia. The presence of albumin in small quantities is not considered as grave an indication. A case recently occurring in the writer's experience shows that eclampsia may occur without diminution in the amount of urine or urea. The patient was a young primipara, and had been very well throughout her pregnancy. There had been slight cedema of the face and hands, but no headaches, vertigo or visual disturbances. Digestion and appetite good, and bowels regular: from 45 to 50 ounces of urine were passed daily. No trace of albumin was found until she was more than seven months



pregnant, when a trace appeared, and some hyaline casts were found. The amount secreted remained normal, and the urea was fully up to the standard. The urine was examined often during the next four weeks, at the end of which time the albumin and casts had increased, but the amount passed was at least 48 ounces a day, with the urea 1.8 per cent. The patient felt perfectly well. Her diet was restricted, but on Thanksgiving Day she ate heartily, and walked out in the afternoon. She was then within three weeks of her expected confinement. The amount of urine passed that day and night was about the same in quantity and quality. The next morning she awoke with headache, and vomited once or twice; at 10:30 A. M. a convulsion occurred. One-eighth grain of morphia was given hypodermically, and repeated during her removal to the hospital after the occurrence of a second convulsion. The cervix was manually dilated, and a third convulsion occurring, 11 ounces of blood were removed from the arm and 2 quarts of saline solution injected into the veins. The chloroform was stopped, the membranes ruptured, and labor pains followed, but were inefficient. Manual dilatation was completed, and 15 minims of tincture of veratrum viridi given, which caused continuous vomiting, finally controlled by  $\frac{1}{2}$  grain of morphine. An asphyxiated child was delivered by forceps, and could not be resuscitated. There were no more convulsions, and in twenty-four hours the patient seemed natural. The urine never fell below 33 ounces, the percentage of urea remained good, and the casts and albumin soon disappeared.

*Abdominal Hysterectomy for Multiple Fibroma with a Five-Months Gravid Uterus.*

GEORGE R. GREEN (*Jour. Amer. Med. As.*, March 16, 1901) was called to see a woman five months pregnant, very weak, with rapid pulse, temperature of  $101^{\circ}$  F., constant pain, and circumscribed tenderness on the left side, while the whole abdomen was irregularly and greatly distended. She had been conscious of a tumor for ten years, but it had rapidly increased since the beginning of pregnancy. She was greatly emaciated, had to be kept under the influence of anodynes, and evidently could not live until the end of gestation. Laparotomy was performed. After separating adhesions two fibroids, each as large as a child's head, were lifted out, and then the gravid uterus, thickly studded with numerous fibroids. The entire mass was removed, the abdominal cavity well irrigated with normal salt solution, and the

wound closed without drainage. Subcutaneous injections of saline solution were given, and repeated twice at intervals of eight hours. The patient made an excellent recovery.

### *Puerperal Insanity.*

ARTHUR C. JELLY (*Boston Med. and Surg. Jour.*, March 21, 1901) has studied the assigned causes, the hospital record, and, where possible, the subsequent history of 200 cases of puerperal insanity recorded in the Institutions' Registration Department of Boston, from 1872 to 1900. The term "puerperal insanity" is here limited to cases developed within six weeks after delivery. In the early months of pregnancy symptoms of mild mental disturbance are not uncommon, and usually persist but a short time. Where the disorder appears first during the latter weeks of pregnancy the prognosis is not as good, for while a slight improvement may follow delivery it is usually temporary, and the patient becomes much worse. The insanity of lactation is usually gradual in its onset, subacute, and not grave in character. There are, however, instances of sudden mania, with fatal termination, and profound melancholia, with suicidal tendencies. Etiologically, the cases may be divided into two groups: (1) Where puerperal conditions such as sepsis, exhaustion, or auto-intoxication seem to be the sole cause; (2) where the excitement, pain and anxiety of childbirth act as mental factors in nervous or defective individuals, just as any strong emotion might.

Heredity plays an important part in fully one-third of the cases, and under this head should be classed apoplexy, epilepsy, and various nervous diseases leading to nervous instability. Tuberculosis in the family history is so frequent that it must be considered a predisposing cause. Alcoholism, either in the woman or her parents, tends to neurotic conditions, which predispose to insanity. It must be borne in mind that alcoholism is sometimes merely an indication of a disturbed mental condition in a pregnant woman who has been habitually temperate when not pregnant.

Psychic and emotional causes are prominent factors. Insanity is twice as common after the birth of illegitimate children, although the poor physical condition often associated with illegitimacy must be remembered.

The importance of sepsis as a factor is shown by the steady decrease of puerperal insanity since the introduction of antiseptics into obstet-

rical practice. Defective elimination by the kidneys may lead to delirium, but such cases are usually of short duration.

In many cases the onset was sudden, reaching a condition of acute mania in twenty-four hours. As a rule, the onset is gradual, loss of appetite and insomnia being first noted in the majority of cases; the patient then passes into a state either of restlessness and excitement, increasing to violence, or becomes deeply depressed, with delusions of a distressing character and suicidal tendencies. Hallucinations are more often of hearing than of sight.

Many septic cases terminate fatally in a short time, and where recovery takes place it is usually slow. Clouston writes that 75 per cent. of his puerperal cases recovered, while 8 per cent. died; and that 90 per cent. of these recoveries took place within six months. Krafft-Ebing gives the average duration of hospital cases due to pregnancy and lactation as nine months, and eight months for puerperal cases.

In thirty cases there was a history of several attacks. One woman was admitted to the hospital for the insane with her first attack in 1870, and in 1899 she was received in her seventeenth attack. In twenty cases mental defect or disorder existed before pregnancy. Thirteen cases died in their first attack, three in the second, and fourteen, who might be called chronic, from repeated attacks. The return of menstruation is a good sign, indicating a return of the bodily functions to normal conditions. A continuance of even a slight rise of temperature is a grave sign. Recovery once started progresses steadily, so that patients are allowed to leave the asylum earlier than when suffering from any other form of mental disease.

When there is any reason to suspect conditions favorable to the development of puerperal insanity the most perfect hygiene possible should be established. Sleep is very important, and if the patient is kept much in the open air it may be obtained without drugs, which should be avoided if possible. When insanity appears after delivery it is well to wait a few days before taking the patient away from home, since some most violent attacks are short in duration. Where sepsis is the cause proper surgical treatment is needed, and in these cases, or in those due to exhaustion, the journey to a hospital may be enough to turn the scale in the wrong direction. There must, however, be a sufficient number of attendants to secure constant watch over the patient, for her own sake and the family's. The child should always be removed. Nourishment must be given by rectum, or the stomach tube if the patient will not eat. Hypnotics must be used freely, and alcoholic stimulants are usually required. As such patients are more

or less anæsthetic, the condition of the pelvic organs, as well as of the bladder and rectum, must be watched. Nursing must always be stopped.

*Cardiac Embolus following Forceps Delivery.*

L. G. LE BEUF (*New Orleans Med. and Surg. Jour.*, April, 1901) mentions the use of forceps or anæsthesia, marked lacerations of the cervix or perinæum, and post-partum hæmorrhage as the principal causes of this complication of labor. The symptoms are a peculiar sense of unrest and undefined fear, a rapid tumultuous pulse, often irregular, and a bruit over the heart in some cases, usually resembling an aneurismal bruit rather than a heart murmur. The temperature is usually normal. Death from this cause occurs from two to three weeks after delivery. After death the heart shows the right side distended, and the right auricle filled with a leathery mass of colorless clotted blood, sometimes laminated. The treatment consists in absolute rest in the horizontal position for at least three weeks, alcohol, ammonia, and the other heart stimulants. It is advisable to stop nursing. Yet after all possible care has been taken the prognosis is very grave. In the case reported of a young, delicate primipara, the pregnancy had been normal except for much nervous apprehension on the part of the patient. Labor progressed well for some time, then the contractions became weaker and irregular, little progress was being made, and the patient complained greatly of exhaustion, although the pulse was only 86. Forceps were applied under chloroform, and the patient was then allowed to come out from under the anæsthetic, and traction was made to assist the pains until the head was on the perinæum. The blades were removed, and an asphyxiated child delivered after a few minutes. An assistant was ordered to keep a hand upon the uterus, and ergot was given, while the writer resuscitated the child. A hæmorrhage suddenly occurred after twenty minutes, but was checked by kneading the uterus, and the expulsion of a normal placenta, after which ergot was given. The uterus contracted firmly. The patient was pale and drowsy, pulse 140 small and wiry, with tumultuous action of the heart. Stimulation and the application of hot bottles to the extremities was tried. Twelve hours later the temperature was  $99\frac{3}{5}^{\circ}$  F.; pulse, 150, and respiration, 28. Nothing abnormal was heard over the heart except its very tumultuous action. The next day the pulse was 120, the patient awake, but very anxious. Heart stimulants were kept up, and quinine given. The patient improved; on



the third day the temperature rose to 102° F., but was normal after purgation with castor oil. The pulse ranged from 88 to 96 for ten days, and the patient was very nervous, and fearful of moving on account of a peculiar feeling of discomfort in her chest. She was allowed to nurse her child, although it was against the writer's better judgment. Two weeks after confinement the temperature was normal, pulse 80, and all heart sounds normal. She was told that she could sit up in bed the next day, as it seemed that no trouble needed to be apprehended. That night, while nursing the child, she had a suffocating feeling, as if something were clutching her heart, she became cyanosed and unconscious, and in nine minutes died in a convulsion.

---

## INDEX TO VOLUME XVIII.

|   |     |
|---|-----|
| Abdominal Hysterectomy for Multiple Fibroma with a Five-Months Gravid Uterus. (Gregg) Abstract.....                               | 552 |
| Abdominal Tumor (Included Fœtus). (Wright and Wylie) Abstract .....   | 67  |
| Abdominal, Vaginal and Pelvic Examinations before Labor. (Page) Abstract .....  | 376 |
| Abortion, Tubal. Hayd .....   | 505 |
| Abortive Treatment of Pneumonia, Catarrhal and Croupous, in Infants and Children, The. (Illoway) Abstract.....                    | 275 |
| Acute Dilatation of the Heart in Diphtheria, Influenza and Rheumatic Fever. (Lees) Abstract .....                                 | 352 |
| Acute Otitis Media and Acute Mastoiditis in Scarlet Fever, Measles and Diphtheria. (Duel) Abstract.....                           | 476 |
| After-Results in Forty Consecutive Cases of Vaginal Hysterectomy performed for Cancer of the Uterus, The. (Lewers) Abstract ..... | 366 |
| "American Medicine." (Editorial) .....  | 427 |
| American Pædiatric Society. Preliminary Programme. (Item).....  | 479 |
| American Year-Book of Medicine and Surgery for 1901, The. Edited by George M. Gould, M.D. (Review).....                           | 525 |
| Analysis of 500 Cases of Lateral Curvature of the Spine and Treatment. (Williams) Abstract .....                                  | 339 |
| Anne Murray: The First Trained Nurse. (Van De Warker)....   | 235 |
| Anteflexion: Its Importance and Its Operative Treatment. (Kingman) Abstract .....   | 284 |
| Appendicitis, Chronic. (Ford) .....   | 385 |
| Appendicitis, The Relation of, to Diseases of the Uterine Appendages. (Beahan) .....  | 103 |
| Arrested Mental Development following Depressed Fracture of the Skull: Trephining; Improvement. (Clark) Abstract. 65              |     |
| Atlas and Epitome of Gynecology. By Dr. O. Schaeffer. (Review) .....  | 128 |

- Atmokaussis: Its Value in the Treatment of Severe and Uncontrollable Uterine Bleedings (Uterine Arteriosclerosis). (Bandler) Abstract ..... 449
- Axis-Traction Forceps with Special Reference to Rotary Axis-Traction in the Treatment of Posterior Positions of the Anatomical Head, The. (Marx) Abstract..... 377
- BALDWIN, J. F.  
*Uretero-Vesical Implantations: Three Cases*..... 400
- BALDWIN, L. Grant.  
*Fibroid Tumor of the Uterus with Intercurrent Development of Malignant Disease of the Endometrium with Bilateral Ovarian Multilocular Cyst*..... 330
- BALDY, J. Montgomery.  
*Cancer of the Uterine Fundus*..... 481
- BEAHAN, Albert L.  
*The Relation of Appendicitis to Diseases of the Uterine Appendages* ..... 103
- BEYEA, H. D.  
*Report of a Case of Carcinoma of the Uterus: Exhibition of Specimen* ..... 529
- BOVÉE, J. Wesley.  
*The Treatment of Cancer of the Uterus*..... 312
- BOYD, George M.  
*Some Remarks on the Cæsarean Section with the Report of a Case for the Relative Indications*. 485 (Discussion).... 527
- Bronchitis and Broncho-pneumonia; Treatment in Children. (Lawrence) Abstract ..... 531
- BROTHERS, Abram.  
*A case of Congenital Hypertrophy of the Cervix complicated by Prolapsus and Bilateral Pyosalpinx in a Girl 17 Years Old: Vaginal Hysterectomy* ..... 10
- "Bread upon the Waters" returned. (Editorial)..... 30
- BUTLER, W. E.  
*Parotid-Gland Extract in Affections of the Ovary* ..... 332
- Cæsarean Section for Fibrocystic Uterine Tumor. (Brodhead) Abstract ..... 455
- Cæsarean Section, Some Remarks on the, with the Report of a Case for the Relative Indications. (Boyd)..... 485

|  |     |
|--|-----|
| Cæsarean Section Three Times in the Same Person in Six-and-a-Half Years. (Coakley) Abstract.....   | 271 |
| CALLAN, Peter A.   |     |
| <i>Can Interstitial Keratitis be prevented in the Offspring of Syphilitics?</i> .....  | 97  |
| Cancer of the Uterine Fundus. (Baldy) .....  | 481 |
| Cancer of the Uterus, The Operative Treatment of. (Montgomery) .....   | 232 |
| Cancer of the Uterus, The Treatment of. (Bovée).....   | 312 |
| Can Interstitial Keratitis be prevented in the Offspring of Syphilitics? (Callan).....   | 97  |
| Cardiac Embolus following Forceps Delivery. (Le Beuf) Abstract .....   | 555 |
| Case of Acute Intestinal Obstruction Due to Papillomatous Ovarian Cyst and the Carcinoma of the Small Intestine, A. (Savary and Nash) Abstract.....                      | 550 |
| Case of Apparent Recovery from a Congenital Abnormality of the Heart (Patent Ductus Arteriosus?) (Thompson) Abstract .....   | 351 |
| Case of Complete Placenta Prævia, A. (Coggeshall) Abstract.  | 453 |
| Case of Complete Transverse Septum of the Vagina impeding Delivery: Urethral Coitus, A. (Rumley-Dawson) Abstract .....   | 174 |
| Case of Congenital Hypertrophy of the Cervix complicated by Prolapsus and Bilateral Pyosalpinx in a Girl 17 Years Old: Vaginal Hysterectomy, A. (Brothers).....          | 10  |
| Case of Conglutinatio et Atresia Orificii Uteri during Parturition, A. (Edgar) Abstract.....   | 174 |
| Case of Cretinism and Thyroid Extract, A. (McGee) Abstract.  | 179 |
| Case of Dystocia from Uterus Bicornis with Contracted Pelvis, A. (McIlwraith) Abstract.....  | 457 |
| Case of Fœtal Anasarca and Strangulation, A. (Carson) Abstract .....   | 83  |
| Case of Fœtal Ichthyosis. (Daniel and Cordes) Abstract.....  | 46  |
| Case of Natural Utero-Intestinal Anastomosis, A. (Kirkley)...  | 309 |
| Case of Obliteration of the Right Ureter by a Calcified Fibroid: Removal of Fibroid and Implantation of Ureter into the Bladder; Recovery, A. (Richardson) Abstract..... | 357 |
| Case of Pemphigus Neonatorum in an Infant Three Days Old, A. (Hodgson) Abstract.....   | 540 |



|  |     |
|--|-----|
| Case of Presentation of the Head, Cord and Foot; Contracted Pelvis; Cæsarean Section, A. (Alexander) Abstract....              | 95  |
| Case of Pseudo-Ileus, following Instrumental Delivery and Adherent Placenta, A. (Rector).....                                  | 102 |
| Case of Puerperal Sepsis from Retained Lochia (Lochiametra) with Remarks, A. (Shears) Abstract.....                            | 272 |
| Case of Scarlatina Pemphigoides, A. (Somers) Abstract....  | 65  |
| Case of Tetanus Neonatorum successfully treated with Antitetanus Serum, A. (McCaw) Abstract.....                               | 541 |
| Case of Tolerance of Abdominal Section in Two Different Pregnancies, A. (Edge) Abstract.....                                   | 96  |
| Case of Traumatic Cephalohydrocele subsequently becoming ossified, A. (Beard) Abstract.....                                    | 67  |
| Case of Tubal Abortion in Which the "Mole" was in Process of Extrusion at Time of Operation, A. (Sutton) Abstract..            | 463 |
| Case of Urinary Calculi lodged in the Vagina. (Taylor) Abstract .....  | 66  |
| Causes and the Significance of the Obstetric Hemorrhages, The. (Edgar) .....   | 301 |
| Causes of Dysmenorrhœa. Judd. 295. (Discussion).....   | 333 |
| Causes of Urgent and Serious Conditions in the Newborn, The. (Wolfe) Abstract.....   | 468 |
| Cephalic Version. (Horn) Abstract.....   | 164 |
| Cereals, Emulsions and Proteids in Infant Feeding. (Rotch) Abstract .....  | 340 |
| Cerebrospinal Meningitis (Weichselbaum, Jaeger) treated by Repeated Lumbar Puncture. (Koplik) Abstract.....                    | 474 |
| Cervical Lacerations, What is the Significance of? (Palmer)....  | 509 |
| CHASE, Walter B.<br><i>Intrapelvic Operations for Relief of Posterior Uterine Displacement</i> .....                           | 5   |
| Choice of Operation in Retrodisplacements of the Uterus, The. (Coggeshall) .....   | 494 |
| Cholæmia and Hæmorrhage. (Gilliam).....  | 107 |
| Chronic Appendicitis. (Ford).....  | 385 |
| Chronic Inversion of the Uterus of Seven Months' Duration successfully treated by Aveling's Repositor. (Oliver) Abstract ..... | 367 |
| Cleidotomy: An Operation Accessory to Craniotomy or Basilysis. (Hallam) Abstract .....   | 570 |

|   |     |
|---|-----|
| Clinical and Pathological Study of the Rash of Scarlet Fever, A.<br>(Schamberg) Abstract.....                   | 55  |
| Closure of Cutaneous Wounds without Suture, The. (Lilienthal)<br>Abstract .....                                 | 363 |
| COGGESHALL, Frederic.<br><i>The Choice of Operation in Retrodisplacements of the Uterus..</i>                   | 494 |
| Complications of Gonorrhœa in Women and Their Prophylactic<br>Treatment, The. (Johnson).....                    | 197 |
| Conservatism in Pelvic Suppuration. (Polak) Abstract.....   | 362 |
| Contribution to Our Knowledge of Proteid Metabolism in Chil-<br>dren. (Tunnicliffe and Rosenheim) Abstract..... | 61  |
| Contribution to the Diagnosis and Treatment of Retroflexion of<br>the Gravid Uterus. (Sinclair) Abstract.....   | 176 |
| Contribution to the Therapeutics of Phlegmasia Alba Dolens, A.<br>(Herzfeld) Abstract.....                      | 93  |
| Contribution to the Treatment of Rupture of the Uterus, A.<br>(Schmit) Abstract .....                           | 84  |
| Cure of Complete Prolapsus Uteri by Plastic Surgery, The. J. D.<br>Emmet. 113. (Discussion).....                | 142 |
| Cysts in the Ligamentum Latum: Their Kinds and Location.<br>(Robinson) Abstract.....                            | 155 |
| DARNALL, Wm. Edgar.<br><i>The Pubescent Schoolgirl</i> .....  |     |
| DAVENPORT, F. H.<br><i>The Treatment of Displacement of the Uterus with Adhesions.</i>                          | 289 |
| Deep Imprints. (Hingston).....  | 1   |
| Deformities or Defects in Development from Adenoids.<br>(Thomson) Abstract .....                                | 536 |
| Diabetes Mellitus in Children: A Report of Cases. (Haas)<br>Abstract .....                                      | 536 |
| Diagnosis and Treatment of Adenoids by the General Practitioner,<br>The. (Huber) Abstract.....                  | 349 |
| Diagnosis and Treatment of Intussusception, The. (Clubbe)<br>Abstract .....                                     | 537 |
| Difficulties in Labor Due to the Shoulders. (McKerron)<br>Abstract .....  | 173 |
| Diphtheria Antitoxin used successfully by the Mouth. (Porteous)<br>Abstract .....                               | 539 |
| Diphtheria Bacilli in Healthy Throats and Noses with Report of<br>Cases. (Denny) Abstract.....                  | 59  |

|   |     |
|---|-----|
| Displacement of the Uterus with Adhesions, the Treatment of.<br>(Davenport) .....   | 289 |
| Divided Profession, A. (Moriarta) Correspondence.....   | 249 |
| Doctor Emmet and The Woman's Hospital. (Editorial).....   | 28  |
| Does the Thyroid Gland influence Conception? (Rankin)<br>Abstract .....   | 167 |
| Douche in the Treatment of Ophthalmia Neonatorum, The.<br>(Holt) Abstract.....  | 280 |
| DOWNES, Andrew J.<br><i>Spinal Anæsthesia in Cases strongly Contra-indicating General</i><br><i>Anæsthesia: A Report of Five Cases</i> .....        | 413 |
| Umbilical Hernia with Ovarian Cyst.....   | 136 |
| Dysmenorrhœa, Causes of. (Judd).....  | 295 |
| Dysmenorrhœa. (Harrison) Abstract.....  | 441 |
| Ear Diseases in Infancy and Childhood. (Coulter) Abstract...  | 277 |
| EARNEST, John G.<br><i>A Solid Ovarian Tumor</i> .....  | 19  |
| Easy Operation for Congenital Ptosis, An. (Fergus) Abstract.  | 541 |
| Ectopic Gestation: Report of Cases. (Gilchrist) Abstract.....   | 454 |
| EDGAR, J. Clifton.<br><i>The Causes and the Significance of the Obstetric Hæmorrhages</i> .   | 301 |
| EDITORIALS.<br><i>"American Medicine"</i> .....   | 426 |
| <i>A Record in Eclampsia</i> .....  | 425 |
| <i>"Bread upon the Waters" returned</i> .....   | 30  |
| <i>Dr. Emmet and the Woman's Hospital</i> .....   | 28  |
| <i>Fair Play for the Scapegoat</i> .....  | 426 |
| <i>In the Matter of Bellevue Hospital</i> .....   | 124 |
| <i>Medullary Narcosis</i> .....   | 32  |
| <i>Ovarian Grafting</i> .....   | 324 |
| <i>Plastic Surgery in Gynæcology</i> .....  | 246 |
| <i>Public Hospitals and the Public</i> .....  | 520 |
| <i>The Medical Association of the Greater City of New York</i> ....   | 121 |
| <i>The Philadelphia Medical Journal</i> .....   | 31  |
| Education of the Sense of Touch in Feeble-minded Children and<br>Its Connection with Manual and Industrial Training, The.<br>(Beach) Abstract ..... | 282 |
| Electrical Treatment of Uterine Fibroids, The. (Segur)<br>Abstract .....  | 158 |
| Emergency Hospital at the Pan-American Exposition. (Item) ..  | 383 |

|   |     |
|---|-----|
| Emmet, Dr. Thomas Addis. (Item).....                                | 96  |
| EMMET, John Duncan.   |     |
| <i>Myomectomy of Nine Myomata during Pregnancy and Delivery</i>     |     |
| <i>at Term</i> .....  | 513 |
| <i>The Cure of Complete Prolapsus Uteri by Plastic Surgery</i> .... | 113 |
| Empyema in Children. (Crandall) Abstract.....                       | 180 |
| Essential Factor in the Causation of Sex, The. (Rumley-Dawson)      |     |
| Abstract .....  | 175 |
| Ethyl Bromide in Obstetrics and Gynæcology. (Krusen)                |     |
| Abstract .....  | 90  |
| Fair Play for the Scapegoat. (Editorial).....                       | 426 |
| Fallacies concerning the Menopause. (Shoemaker) Abstract..          | 161 |
| Fatal Rupture of an Aneurism of the Splenic Artery immediately      |     |
| after Labor. (Nodes and Hinds) Abstract.....                        | 465 |
| Fate of Sponges, Ligatures and Other Foreign Bodies in the          |     |
| Peritonæum, The. (Beck) Abstract.....                               | 72  |
| Feeding of Infants, The. Home Guide for modifying Milk. By          |     |
| Joseph E. Winters, M.D. (Review).....                               | 428 |
| Fibroid Tumor of the Uterus with Intercurrent Development of        |     |
| Malignant Disease of the Endometrium with Bilateral                 |     |
| Ovarian Multilocular Cyst. (Baldwin).....                           | 330 |
| Fifty-eight Cases of Puerperal Eclampsia without Mortality.         |     |
| (Stroganoff) Abstract.....  | 373 |
| Fœtal and Infantile Typhoid. (Morse) Abstract.....                  | 180 |
| FORD, Willis E.   |     |
| <i>Chronic Appendicitis</i> .....                                   | 385 |
| Fourteen-and-a-Half Hours' Artificial Respiration in a Child One    |     |
| Week Old: Recovery. (Keith) Abstract.....                           | 68  |
| Full-Term Pregnancy in a Rudimentary Horn of Uterus; Missed         |     |
| Labor (Five Months); Abdominal Section and Removal of               |     |
| Sac; Recovery. (Targett) Abstract.....                              | 462 |
| Further Report of a Case of Intraligamentous Cyst with Papilloma    |     |
| of the Right Ovary, A. (Polak).....                                 | 140 |
| Further Report on Parasitic Invasion of the Human Milk Ducts.       |     |
| A. (Smith) Correspondence.....                                      | 127 |
| Gastric Fever affecting Children. (McCullough) Abstract....         | 177 |
| GILLIAM, D. Todd.   |     |
| <i>Colæmia and Hæmorrhage</i> .....                                 | 107 |



|  |     |
|--|-----|
| Gonorrhœa in Women, The Complications of, and Their Prophylactic Treatment. (Johnson).....   | 197 |
| Gynæcology, The Streptococcus in. (Hunner).....  | 404 |
| Hæmorrhage, Intrapelvic, An Unique Case of, Due to a hitherto Undescribed New Growth. (Manton).....  | 20  |
| HAMMOND, L. J.   |     |
| <i>Pyosalpinx empties Through Uterus</i> .....   | 130 |
| Have Maternal Impressions any Effect upon the Fœtus in Utero? (Duncan) Abstract .....  | 95  |
| HAYD, Herman E.  |     |
| <i>Tubal Abortion</i> .....  | 505 |
| Hernia of the Fallopian Tube without Hernia of the Ovary. (Morf) Abstract.....   | 444 |
| HINGSTON, Sir William H.   |     |
| <i>Deep Imprints</i> .....   | I   |
| HUNNER, Guy L.   |     |
| <i>The Streptococcus in Gynæcology</i> .....   | 404 |
| Hyalin Casts Present in Puerperal Eclampsia. (Boston) Abstract .....   | 167 |
| Hydrencephalocele. (Beck) Abstract.....  | 186 |
| Hydrostatic Test of Stillbirth, The. (Dilworth) Abstract.....  | 187 |
| Icterus Neonatorum. (McClanahan) Abstract.....   | 184 |
| Immediate and Remote Results in One Hundred Conservative Operation on the Ovaries and Tubes with Brief Reports of Four Cases, The. (Burrage) Abstract..... | 545 |
| Impacted and Displaced Gravid Uterus with Fibroid. (MacLeod) Abstract .....  | 381 |
| Incontinence of Urine, Seventeen Years of Congenital Nocturnal, cured by Operation. (George H. Noble).....   | 110 |
| Indentations in the Skulls of the Newborn. (Gell) Abstract..   | 382 |
| Indications for Renewal of Plaster-of-Paris Jackets in Tubercular Spondylitis. (Ashley) Abstract.....  | 533 |
| Infant Feeding in Its Relation to Health and Disease. By Louis Fisher, M.D. (Review).....  | 327 |
| Infantile Colic and Colic in Infants. (Illoway) Abstract.....  | 466 |
| Infantilism. (English) Abstract.....   | 342 |
| Insanity in Women associated with Pelvic Diseases. (Henry) Abstract .....  | 447 |
| In the Matter of Bellevue Hospital. (Editorial).....   | 124 |

|  |     |
|--|-----|
| Intracranial Hæmorrhage of the Newborn. (Wilson) Abstract.   | 342 |
| Intrapelvic Operations for Relief of Posterior Uterine Displacements. Chase. 5. (Discussion).....  | 45  |
| Intravesical Evidences of Perivesical Inflammatory Processes in the Female, The. (Bierhoff) Abstract.....  | 446 |
| Irreducible, Incarcerated, Retroflexed Gravid Uterus. (Quinn) Abstract .....   | 375 |
| JOHNSON, Joseph Taber.   |     |
| <i>The Complication of Gonorrhœa in Women and Their Prophylactic Treatment</i> .....   | 197 |
| JOHNSTON, George Ben.  |     |
| <i>Osteo-Fibromyoma of the Uterus</i> .....  | 305 |
| JUDD, Albert M.  |     |
| <i>Causes of Dysmenorrhœa</i> .....  | 295 |
| KIRKLEY, C. A.   |     |
| <i>A Case of Natural Urtero-Intestinal Anastomosis</i> .....   | 309 |
| KRUSEN, Wilmer.  |     |
| <i>Organotherapy in Gynæcology</i> .....   | 211 |
| Laryngolic Aspects of Pregnancy. (Dickerman) Abstract.....   | 370 |
| Laryngolic Aspects of Pregnancy. (Smith) Correspondence....  | 430 |
| Local Destruction and Regional Sterilization of Cancer by the Cataphoric Diffusion of the Electrolytic Salts of Mercury, The: A Further Report. (Massey) Abstract..... | 360 |
| Management of Pregnancy and Labor complicated by Cardiac Disease. (Gillespie) Abstract.....  | 169 |
| MANTON, W. P.  |     |
| <i>An Unique Case of Intrapelvic Hæmorrhage Due to a hitherto Undescribed New Growth</i> .....   | 20  |
| Masturbational Neuroses. (Krauss) Abstract.....  | 190 |
| Maternal Impressions. (McHattie and Allen) Abstract.....   | 163 |
| Maternal Impressions. (Staples) Abstract.....  | 267 |
| MCGANNON, M. C.  |     |
| <i>Vesico-vaginal Fistulæ</i> .....  | 391 |
| Measles and the Exanthemata. (Wahrer) Abstract.....  | 55  |
| Medical Association of the Greater City of New York, The. (Editorial) .....  | 121 |

|   |     |
|---|-----|
| Medical-News Pocket Formulary, New (Third) Edition, The.<br>By E. Quin Thornton, M.D. (Review).....   | 429 |
| Medullary Narcosis. (Editorial).....  | 32  |
| Modern Cæsarean Section: An Ideal Method of Treatment for<br>Placenta Prævia. (Dudley) Abstract.....  | 88  |
| MONTGOMERY, E. E.<br><i>The Operative Treatment of Cancer of the Uterus</i> .....   | 232 |
| MORIARTA, Douglas C.<br><i>A Divided Profession. (Correspondence)</i> .....   | 249 |
| <i>Uterine Curettement</i> .....  | 12  |
| MORRIS, Robert T.<br><i>Pus in the Peritonæal Cavity</i> .....  | 193 |
| Nausea and Vomiting in Pregnancy. (Batten) Abstract.....  | 455 |
| Nephritis complicating Gynæcological Disease. (Shoemaker)<br>Abstract .....   | 359 |
| Nervous Hyperpyrexia following Parturition. (Distin) Abstract.  | 459 |
| Neurological Aspects of Pregnancy. (Brower) Abstract.....   | 372 |
| New Spinal Jacket, A. (Tracy) Abstract.....   | 58  |
| NOBLE, Charles P.<br>Two Interesting Cases:<br>I. <i>Multiple Sinuses in the Perinæum resulting from Infection<br/>and the Failure to remove Sutures.</i> II. <i>Pelvic Abscess re-<br/>sulting from Attempted Abortion in an Unimpregnated<br/>Woman</i> ..... | 100 |
| NOBLE, George H.<br><i>Seventeen Years of Congenital Nocturnal Incontinence of Urine<br/>Cured by Operation</i> .....   | 110 |
| <i>Pregnancy in Uterus Bicornis</i> .....   | 220 |
| Notes on a Case of Complete Inversion of the Puerperal Uterus.<br>(Elder) Abstract .....  | 462 |
| Note on the Knee-Jerk in Chorea, A. (Gordon) Abstract.....  | 540 |
| Note on the Treatment of Puerperal Eclampsia, A. (Lyle)<br>Abstract .....   | 274 |
| Obstetrical Paralysis, Infantile and Maternal. (Thomas)<br>Abstract .....   | 85  |
| Obstetric Clinic. By Denslow Lewis, Ph.C., M.D. (Review) ..   | 39  |
| Obstetric Dilator, An. By H. F. Gau, M.D. (New Instrument) ..   | 191 |
| Obstetric Hemorrhages, The Causes and the Significance of the.<br>(Edgar) .....   | 301 |

|  |     |
|--|-----|
| On Gonorrhœal Cystitis in the Female. (Bierhoff) Abstract....  | 356 |
| On the Causation of the Congenital Stridor in Infants. (Thomson and Turner) Abstract.....                | 188 |
| On the Desirability of Combined Operations in Pelvic and Abdominal Surgery. (Manton) Abstract.....       | 543 |
| On Subcutaneous Symphysiotomy. (Herman) Abstract.....  | 464 |
| On the So-called "Irritable Bladder" in the Female. (Bierhoff) Abstract .....                            | 76  |
| On the Sterilization of Milk: Its Advantages and Limitations. (Blackader) Abstract .....                 | 344 |
| Oöphorectomy and Hysterectomy for Epilepsy. (Lindley) Abstract .....                                     | 363 |
| Operation devised for the Treatment of Marked Prolapse of the Rectum in Women, An. (Bovée) Abstract..... | 73  |
| Operation <i>versus</i> Truss in the Inguinal Hernia of Childhood. (Russell) Abstract .....              | 63  |
| Operative Treatment of Cancer of the Uterus, The. Montgomery. 232. (Discussion) .....                    | 261 |
| Ophthalmia Neonatorum Prophylaxis. (Todd) Abstract.....  | 50  |
| Ophthalmologic Aspects of Pregnancy. (Wood) Abstract.....  | 372 |
| Opisthotonos Due to Dorsal Sclerema Neonatorum. (Browning) Abstract .....                                | 61  |
| Organotherapy in Gynæcology. Krusen. 211. (Discussion)....   | 251 |
| Osteo-Fibromyoma of the Uterus. (Johnston).....  | 305 |
| Ovarian Grafting. (Editorial).....   | 324 |
| Ovarian Tumor, A Solid. (Earnest).....   | 19  |

## PALMER, Chauncey D.

|  |     |
|--|-----|
| <i>What is the Significance of Cervical Lacerations</i> .....                                      | 509 |
| Parotid-Gland Extract in Affections of the Ovary. (Butler)....                                     | 332 |
| Peculiar Accident from the Use of Rubber Gloves, A. (Lanphear) Abstract .....                      | 359 |
| Peculiar Complication in Midwifery, A. (More) Abstract....   | 459 |
| Pelvic Sarcoma with Chylous Ascites. (Lea) Abstract.....   | 369 |
| Persistence of Symptoms after Removal of Adenoids and Tonsils: Their Causes. (Huber) Abstract..... | 472 |
| Philadelphia Medical Journal, The. (Editorial).....  | 31  |
| Physiologic Resuscitation of the Stillborn. (Leichty) Abstract.                                    | 452 |
| Placenta Prævia. (Giltner) Abstract.....   | 163 |
| Plastic Surgery in Gynæcology. (Editorial).....  | 246 |



|  |          |
|--|----------|
| Plea for General Anæsthesia in the Treatment of Mammary Abscess, A. (Field) Abstract.....  | 154      |
| Plea for the Earlier Recognition of Squint in Children by the Family Physician and the Earlier Application of the Methods of Treatment, A. (Veasy) Abstract..... | 470      |
| Pocket Text-Book of Obstetrics, A. By David J. Evans, M.D. (Review) .....  | 40       |
| Poisoning by Vapo-cresolene. (Adams) Abstract.....   | 182      |
| POLAK, John O.<br><i>A Further Report of a Case of Intraligamentous Cyst with Papilloma of the Right Ovary</i> .....   | 140      |
| Position in the After-treatment of Abdominal Operation. (Springer) Abstract .....  | 283      |
| Posterior Uterine Displacements, Intrapelvic Operations for Relief of. (Chase).....  | 5        |
| Post-operative Treatment of Abdominal Section in Women. (Chase) Abstract .....   | 152      |
| Practical Surgery. By N. Senn, M.D. (Review).....  | 524      |
| Pregnancy and Heart Disease. (Sears) Abstract.....   | 81       |
| Pregnancy and Labor complicated with Ovarian Tumors. Sutton) Abstract .....  | 460      |
| Pregnancy following Removal of Both Ovaries and Tubes. (Morris) Abstract .....   | 269      |
| Pregnancy in Typhoid. (Terry) Abstract.....  | 376      |
| Pregnancy in Uterus Bicornis. (George H. Noble).....   | 220      |
| Premature Infants. (Adrian) Abstract.....  | 532      |
| Prevention and Management of Infection of the Breast during Lactation. (Bacon) Abstract.....   | 267      |
| Prevention of Nausea and Vomiting during Anæsthesia, The. (Hirschman) Abstract .....   | 158      |
| Primary Ovarian Pregnancy with Rupture Fourteen Days after Last Menstruation. (Anning and Littlewood) Abstract..   | 273      |
| Programme of the Twenty-Sixth Annual Meeting of the American Gynæcological Society, Chicago, May 30, 31 and June 1. (Item).....                                  | 478      |
| Progressive Medicine. Edited by Hobart Amory Hare, M.D. Volume I, 1901. (Review).....  | 328, 428 |
| Prolapsus Uteri, Complete, The Cure of, by Plastic Surgery. (J. D. Emmet).....   | 113      |
| Pseudo-Ileus, A Case of, following Instrumental Delivery and Adherent Placenta. (Rector).....  | 102      |

|  |     |
|--|-----|
| Pubescent Schoolgirl, The. (Darnall).....                          | 488 |
| Public Hospitals and the Public. (Editorial).....                  | 520 |
| Puerperal Insanity. (Jelly) Abstract.....                          | 553 |
| Pulmonary Tuberculosis in Infants and Children. (Norbury)          |     |
| Abstract .....   | 182 |
| Purulent Rhinitis of Children as a Source of Infection in Cervical |     |
| Adenitis, The. (Cobb) Abstract.....                                | 281 |
| Pus in the Peritonæal Cavity. (Morris).....                        | 193 |
| Pyosalpinx empties through Uterus. (Hammond).....                  | 130 |
| Quantity of Diphtheria Antitoxin required in the Treatment of      |     |
| Diphtheria, The. (Park) Abstract.....                              | 53  |
| Record in Eclampsia, A. (Editorial).....                           | 425 |
| RECTOR, Joseph M.  |     |
| <i>A Case of Pseudo-Ileus, following Instrumental Delivery and</i> |     |
| <i>Adherent Placenta</i> .....                                     | 102 |
| Rectal Feeding in Throat Diseases. (Bardes) Abstract.....          | 535 |
| Recurrent Vomiting in Children. (Griffith) Abstract.....           | 51  |
| Re-expansion of the Uterus in Labor. (Benjamin) Abstract....       | 170 |
| Relation of Appendicitis to Diseases of the Uterine Appendages,    |     |
| The. (Beahan) .....  | 103 |
| Relation of Ovarian Disease to Insanity and its Treatment, The.    |     |
| (Hobbs) Abstract .....   | 451 |
| Relation of Scurvy to Recent Methods of Artificial Feeding, The.   |     |
| (Griffith) Abstract .....  | 347 |
| Relative Value of Curettage and Local Applications to the Endo-    |     |
| metrium, The. (Byford) Abstract.....                               | 71  |
| Remarks on Indications for the Radical Therapy of Uterine          |     |
| Fibroids. (Thienhaus) Abstract.....                                | 156 |
| Remarks on the Pathogenesis and Prophylaxis of Acute Rheu-         |     |
| matic Fever in Children. (Heiman) Abstract.....                    | 279 |
| Removable Buried Suture for Abdominal Incision, A. (Kane)          |     |
| Abstract .....   | 283 |
| Report of a Case of Carcinoma of the Uterus: Exhibition of         |     |
| Specimen. (Beyea) .....  | 529 |
| Removal of a Child's Head by Abdominal Section. (Walker)           |     |
| Abstract .....   | 370 |
| Removal of Epithelioma of Cervix Uteri during Pregnancy and        |     |
| Vaginal Hysterectomy after Delivery. (Kinkhead)                    |     |
| Abstract .....   | 368 |

|   |     |
|---|-----|
| Report of a Case of Deciduoma Malignum. (Pettigrew)                   |     |
| Abstract .....  | 80  |
| Report of a Case of Diabetes in an Infant. (Young) Abstract..         | 348 |
| Resection of the Pendulous, Fat Abdominal Wall in Cases of            |     |
| Extreme Obesity. (Peters) Abstract.....                               | 442 |
| Resection of the Rectum per Vaginam. (Murphy) Abstract...             | 364 |
| REVIEWS.  |     |
| <i>A Pocket Text-Book of Obstetrics.</i> By David J. Evans, M.D..     | 39  |
| <i>A Text-Book on Practical Obstetrics.</i> By Egbert H. Grandin,     |     |
| M.D., Third Edition.....  | 327 |
| <i>Atlas and Epitome of Gynæcology.</i> By O. Schaefer, M.D.          | 128 |
| <i>Infant Feeding in Its Relation to Health and Disease.</i> By Louis |     |
| Fisher, M.D.....  | 327 |
| <i>Medical-News Pocket Formulary, New (Third) Edition.</i> By         |     |
| E. Quin Thornton, M.D.....  | 429 |
| <i>Obstetric Clinic.</i> By Denslow Lewis, Ph.C., M.D.....            | 39  |
| <i>Principles of Surgery.</i> By N. Senn, M.D., Ph.D., LL.D.....      | 524 |
| <i>Progressive Medicine.</i> Edited by Hobart Amory Hare, M.D.        |     |
| Volume IV., 1900.....   | 328 |
| <i>Progressive Medicine.</i> Edited by Hobart Amory Hare, M.D.        |     |
| Vol. I., 1901.....  | 428 |
| <i>Self-Examination for Medical Students.</i> .....                   | 525 |
| <i>The American Year-Book of Medicine and Surgery for 1901.</i>       |     |
| Edited by George M. Gould, M.D.....                                   | 525 |
| <i>The Feeding of Infants. Home Guide for modifying Milk.</i> By      |     |
| Joseph E. Winters, M.D.....   | 428 |
| Rôle of the Kidney in the Production of the Toxæmias of Preg-         |     |
| nancy, The. (Van Sweringen) Abstract.....                             | 551 |
| Sarcoma of the Uterus. (Knott) Abstract.....                          | 358 |
| Schoolgirl, The Pubescent. (Darnall).....                             | 488 |
| Self-Examination of Medical Students. (Review).....                   | 525 |
| Separation of the Recti Abdominis Muscles and Stretching of the       |     |
| Linea Alba. (Webster) Abstract.....                                   | 159 |
| Septicæmia—Acute Bacteriæmia; Pyæmia—Chronic Bacteriæmia;             |     |
| Indications for Hysterectomy and Indications for Ab-                  |     |
| dominal Section and Drainage in Puerperal Infection, The.             |     |
| (Boldt) Abstract .....  | 270 |
| Series of Ten Successful Cases of Cæsarean Section. (Sinclair)        |     |
| Abstract .....  | 379 |

|  |     |
|--|-----|
| Seventeen Years of Congenital Nocturnal Incontinence of Urine<br>cured by Operation. (George H. Noble).....  | 110 |
| Shock in Abdominal Operations. (Turck) Abstract.....   | 448 |
| Simple Méthod for writing Prescriptions for Children, A.<br>(Huhner) Abstract .....  | 60  |
| Smallpox in Fœtus aborted at the Fifth Month. (Rummel)<br>Abstract .....   | 92  |
| Solid Ovarian Tumor, A. (Earnest).....   | 19  |
| Some forms of Auto-intoxication observed during Pregnancy and<br>the Puerperium. (Fothergill) Abstract.....  | 82  |
| Some Observations upon the Temperatures of apparently Healthy<br>Children: An Experimental Study. (Young) Abstract..   | 348 |
| Some of the Accidents from the Use of the Obstetric Forceps.<br>(Gibbons) Abstract .....   | 266 |
| Some Remarks on the Cæsarean Section with the Report of a Case<br>for the Relative Indications. (Boyd).....  | 4   |
| Special Journalism and the General Practitioner. (Breuer) Cor-<br>respondence .....  | 35  |
| Special Journalism and the General Practitioner. ("R.")<br>Correspondence .....  | 248 |
| Spinal Anæsthesia in Cases strongly Contra-indicating General<br>Anæsthesia: A Report of Five Cases. (Downes).....   | 413 |
| Spoon-shaped Indentations in the Skulls of the Newborn and a<br>New Method of Treatment for the Immediate Relief of the<br>Deformity. (Kerr) Abstract.....           | 458 |
| Streptococcus in Gynæcology, The. Hunner. 404. (Discussion).   | 432 |
| Study of Congenital Sarcoma of the Liver and Suprarenal, A.<br>(Pepper) Abstract .....   | 470 |
| Study of Eighty-one Cases operated upon under Analgesia ob-<br>tained by Subarachnoid Spinal Cocainization, A. (Fowler)<br>Abstract .....                            | 287 |
| Study of the Plantar Reflex in Infancy, A. (Morse) Abstract..  | 280 |
| Successful Case of Porro's Operation for Ruptured Uterus com-<br>plicated by a Large Myoma and a Five-and-a-Half Months'<br>Pregnancy, A. (Cole-Baker) Abstract..... | 172 |
| Sudden Death in Infancy and Childhood. (Vipond) Abstract..   | 354 |
| Surgical Diagnosis of Right-side Abdominal Diseases, The.<br>(Beahan) Abstract .....   | 433 |
| Teeth in Pregnancy, The. (Talbot) Abstract.....  | 371 |
| Text-Book on Practical Obstetrics, A. By Egbert H. Grandin<br>M.D. and Geo. W. Jarman M.D. (Review).....   | 327 |



|  |     |
|--|-----|
| Three Dangerous Operations. (Deaver) Abstract.....   | 544 |
| Torticollis. (Wood) Abstract.....  | 47  |
| Tracheloplasty. (Newman) Abstract.....   | 546 |
| Traumatic Tetanus in a Child of Six-and-a-Half Years: Anti-toxin; Recovery. (Coates) Abstract.....   | 189 |
| Treatment of Burns in Infancy and Childhood, The. (Allen) Abstract .....   | 473 |
| Treatment of Cancer of the Uterus, The. (Bovée).....   | 312 |
| Treatment of Diphtheria by Iodine, The. (Taylor) Abstract...   | 66  |
| Treatment of Displacement of the Uterus with Adhesions, The. (Davenport) .....   | 289 |
| Treatment of Hernia in Children. (Ochsner) Abstract.....   | 185 |
| Treatment of Influenza in Children. (Jacobi) Abstract.....   | 276 |
| Treatment of Placenta Prævia by Cæsarean Section with Report of a Successful Case, The. (Donohue) Abstract.....  | 165 |
| Treatment of Puerperal Eclampsia by Saline Diuretic Infusions. The. (Jardine) Abstract.....  | 461 |
| Treatment of Puerperal Eclampsia. (Killibrew) Abstract.....  | 91  |
| Treatment of Retrodisplacements of the Uterus. (McGuire) Abstract .....  | 70  |
| Treatment of Severe Cases of Diphtheria with Saline Infusions. The. (Laslett) Abstract.....  | 63  |
| Tubal Abortion. (Hayd).....  | 505 |
| Tubal Gestation with Rupture in a Woman previously operated upon for Tubal Gestation with Missed Labor. (Lyth) Abstract .....  | 162 |
| Two Interesting Cases:   |     |
| I. Multiple Sinuses in the Perinæum resulting from Infection and the Failure to remove Sutures. II. Pelvic Abscess resulting from Attempted Abortion in an Unimpregnated Woman. Charles P. Noble. 100. (Discussion)..... | 136 |
| Umbilical Hernia with Ovarian Cyst. (Downes).....  | 136 |
| Unique Case of Intrapelvic Hæmorrhage Due to a hitherto Undescribed New Growth, An. (Manton).....  | 20  |
| Unusual Behavior of Cornual Placental Implantation. (Bouvier) Abstract .....   | 93  |
| Uretero-intestinal Anastomosis, A Case of Natural. (Kirkley)...  | 309 |
| Uretero-vesical Implantation: Three Cases. (Baldwin).....  | 400 |
| Use of Hot-water Vaginal Injections, The. (Burtenshaw) Abstract .....  | 547 |

|   |     |
|---|-----|
| Uterine Curettement. (Moriarta).....  | 12  |
| Uterine Fundus, Cancer of the. (Baldy).....   | 481 |
| Uterine Tumors in Infancy, Childhood and Early Life.<br>(Williams) Abstract .....                                     | 549 |
| Uterus, The Choice of Operation in Retrodisplacements of the.<br>(Coggeshall) .....                                   | 494 |
| Uterus Which contained 120 Fibroids, A. (Sutton) Abstract..   | 550 |
| Value of Hot-Water Immersion Bath in the Treatment of Threat-<br>ening Puerperal Eclampsia, The. (Green) Abstract.... | 168 |
| Value of Thermal Carbonated Saline Baths in Gynæcology, The.<br>(Bandler) Abstract .....                              | 74  |
| VAN DE WARKER, Ely.<br><i>Anne Murray: The First Trained Nurse</i> .....  | 235 |
| Ventral Hernia following Abdominal Section. (Eads) Abstract ..  | 286 |
| Vesical Hæmorrhage during Labor. (Brown) Abstract.....  | 273 |
| Vesico-vaginal Fistulæ. (McGannon).....   | 391 |
| Vomiting of Pregnancy: Suspension of Pregnant Uterus.<br>(Vogel) Abstract .....                                       | 456 |
| What is the Significance of Cervical Lacerations? (Palmer)..  | 509 |
| Woolen Yarn Truss in Infantile Hernia, The. (Boland)<br>Abstract .....  | 469 |
| Xeroderma Pigmentosum. (Wolff) Abstract.....  | 346 |

LIST OF CONTRIBUTORS OF ORIGINAL ARTICLES TO  
VOLUME XVIII.

|   | PAGE.    |
|---|----------|
| Hingston, Sir William H., Montreal, Canada.....   | 1        |
| Chase, Walter B., Brooklyn, N. Y.....             | 5        |
| Brothers, Abram, New York, N. Y.....              | 10       |
| Moriarta, Douglas C., Saratoga Springs, N. Y..... | 12       |
| Earnest, John G., Atlanta, Ga.....                | 19       |
| Manton, W. P., Detroit, Mich.....                 | 20       |
| Callan, Peter A., New York, N. Y.....             | 97       |
| Noble, Charles P., Philadelphia, Pa.....          | 100, 101 |
| Beahan, Albert L., Canandaigua, N. Y.....         | 103      |
| Gilliam, D. Todd, Columbus, Ohio.....             | 107      |
| Noble, George H., Atlanta, Ga.....                | 110, 220 |
| Emmet, John Duncan, New York, N. Y.....           | 113, 513 |
| Morris, Robert T., New York, N. Y.....            | 193      |
| Johnson, Joseph Taber, Washington, D. C.....      | 197      |
| Krusen, Wilmer, Philadelphia, Pa.....             | 211      |
| Montgomery, E. E., Philadelphia, Pa.....          | 232      |
| Van De Warker, Syracuse, N. Y.....                | 235      |
| Davenport, F. H., Boston, Mass.....               | 289      |
| Judd, Albert M., Brooklyn, N. Y.....              | 301      |
| Johnston, George Ben, Richmond, Va.....           | 305      |
| Kirkley, C. A., Toledo, Ohio.....                 | 309      |
| Bovée, J. Wesley, Washington, D. C.....           | 312      |
| Ford, Willis E., Utica, N. Y.....                 | 385      |
| McGannon, M. C., Nashville, Tenn.....             | 391      |
| Baldwin, J. F., Columbus, Ohio.....               | 400      |
| Hunner, Guy L., Baltimore, Md.....                | 404      |
| Downes, Andrew J., Philadelphia, Pa.....          | 413      |

LIST OF ILLUSTRATIONS IN VOLUME XVIII.

|  | PAGE.                   |
|--|-------------------------|
| A Case of Congenital Hypertrophy of the Cervix complicated by<br>Prolapsus and Bilateral Pyosalpinx in a Girl 17 Years Old:<br>Vaginal Hysterectomy. (Brothers)..... | 11                      |
| An Unique Case of Intrapelvic Hæmorrhage Due to a hitherto<br>Undescribed New Growth. (Manton).....  | 24, 25, 26              |
| Seventeen Years of Congenital Nocturnal Incontinence of Urine<br>cured by Operation. (Geo. H. Noble).....  | III, 112                |
| An Obstetrical Dilator. (Gau).....   | 192                     |
| Pregnancy in Uterus Bicornis. (Geo. H. Noble).....   | 222, 228, 229           |
| Fibroid Tumor of the Uterus with Intercurrent Development of<br>Malignant Disease of the Endometrium with Bilateral<br>Ovarian Multilocular Cyst. (Baldwin).....     | 330, 331                |
| Emergency Hospital at the Pan-American Exposition. (Item)...   | 383                     |
| Vesico-vaginal Fistulæ. (McGannon)....   | 394, 395, 396, 397, 398 |



## EDITORIALS IN VOLUME XVIII.

|  | PAGE. |
|--|-------|
| Dr. Emmet and the Woman's Hospital.....                      | 28    |
| "Bread upon the Waters" returned.....                        | 30    |
| The Philadelphia Medical Journal.....                        | 31    |
| Medullary Narcosis.....                                      | 32    |
| The Medical Association of the Greater City of New York..... | 121   |
| In the Matter of Bellevue Hospital.....                      | 124   |
| Plastic Surgery in Gynæcology.....                           | 246   |
| Ovarian Grafting .....                                       | 324   |
| A Record of Eclampsia.....                                   | 425   |
| Fair Play for the Scapegoat.....                             | 426   |
| "American Medicine".....                                     | 427   |
| Public Hospitals and the Public.....                         | 520   |













